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ABSTRACT

The history of the High School Geography Project is presented. The paper is divided into five topics. (1) "Search for Direction" traces the project from its origins in 1961 to the emergence of a curriculum development model. (2) "The Elaboration of the Curriculum Model and the Evolution of the Development Process Model" explains the relationship between the curriculum and the learner and explores the implications of geographer-educator cooperation. (3) "The Curriculum Evaluation Model" describes the five cycles of trial application and revision which led to the final adoption of the model. (4) "Accomplishment of the Project Objectives" compares accomplishments of the project during its nine-year history with the early objectives. The author relates the steering committee's decision that the original objective of creating a secondary-level geography course had been realized and even surpassed. (5) "Implications for Education" admonishes curriculum leaders to remember that curriculum dissemination and implementation are as important as research and development. Sample evaluation instruments and references are provided. (Author/DE)

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EVOLUTION OF A CURRICULUM PROJECT:

THE HIGH SCHOOL GEOGRAPHY PROJECT

by

Robert B. Pratt

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Preface

The High School Geography Project dates back to 1961, and its nine-year history embodies a decade of valuable experience in curriculum development and design. This experience over a decade saw the mantle of curriculum responsibility widen to include not only educationists, textbook authors, and curriculum consultants but also academic scholars who, in collaboration with classroom teachers, tried to make their disciplines teachable in the schools. This learning experience for scholars, for teachers, and for students warrants a fuller telling of the High School Geography Project story.

Between the earliest efforts of the scholars involved and the final completed set of course materials, the story involves a tremendous outpouring of both human and financial resources. It is a story of how the scholars' earliest preconceptions about geography and education gave way to the reality that exists in the high school classroom. One way or another, impractical objectives were dropped or seriously modified to produce an end product that was interesting to students and highly teachable. A stress on student learning rather than content coverage liberated the Project from the narrow focus of geography as a discipline and permitted consideration of the broader question of geography's relation to the lives of students, to the other social science disciplines, and to educational thought generally.

This history of the High School Geography Project has grown out of Robert Pratt's doctoral dissertation, accepted by the School of Education of the University of Colorado in 1970. Pratt and others have reviewed that initial work, revised it, and updated it several times.

The Macmillan Company and the Association of American Geographers are currently revising the 1970 edition of the Project's materials, *Geography in an Urban Age*, and the new version will be available within the year. The renewed interest in these excellent materials that will follow from this new edition makes the publication of Pratt's retrospective account of the Project appropriate at this time.

Irving Morrissett
Executive Director, Social
Science Education Consortium

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Robert B. Pratt

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Chapter 1

Search for Direction

Geography, as a school subject, has been characterized by fluctuation between two distinct approaches to the subject. The spatial tradition is the oldest, originating with the Greeks, and best articulated by Ptolemy as the locational approach. The regional tradition was developed by the more practical Romans, and was established by Strabo as a study of the unique nature of places and the problems peculiar to those places. Pendular swings between these two approaches have been characteristic of geographic education in the United States.

The spatial tradition dominated the curriculum of the Latin grammar school. In time, this classical curriculum gave way to the academy and regional geography, which better reflected the economic and nationalistic needs of the country. Regional geography became widely taught in the schools. Its general acceptance and popularity often meant that, although taught widely, the subject was frequently not taught well. Regional geography became characterized as "sailor geography" and involved the rote memorization of long lists of descriptive facts.

In response to "sailor geography" concerned geographers and educators advanced a "new" spatial geography. This movement started with Arnold Guyot in 1873 and reached its high water mark with William Morris Davis and the Committee of Ten of the National Education Association in 1894. However, this theoretical and scientific approach to geography tended to be difficult to teach and impractical and to promote the same type of rote memorization that existed in the older, regional approach. The new movement was short lived, succumbing to these faults and to the demands by progressive theorists that geography be made more "human."

By the mid-20th century, geographers concerned with precollege geographic education came increasingly to believe that the subject had lost its unique potential within the school curriculum. The state of geographic illiteracy of the American public was made painfully evident during World War II. Clyde Kohn, writing in 1959, claimed that geographic education had become little more than an attempt by social studies teachers

to provide background materials for social or historical problems. Its role in the schools had been reduced to providing an environmental basis for the other social studies, not presenting the subject as a unique body of content with its own methodology. It should, he noted, be more than cataloguing the contents of a place; the analysis of these contents in space should receive the major emphasis. The reform efforts of the post-war years led to a reappraisal of geography as a secondary school subject. Fundamental changes in geographic education came as a result of Sputnik in 1957, which ushered in a decade stressing the scientific disciplines, one product of which was the High School Geography Project. The Project represented a departure from the regional tradition characteristic of progressive education, and, once again, embraced a more or less spatial approach to geography.

The Origins of the High School Geography Project

Gilbert White influenced the High School Project more consistently and profoundly than any other single individual. His interest in geographic education was evident in 1956 when, at the University of Chicago, he began teaching a course on the teaching of geography. White's ideas concerning the nature of geographic education came to the attention of Sargent Shriver, who at that time was chairman of the Chicago Board of Education. During this period, the Chicago schools were offering a course in commercial geography at the sophomore level. This course suffered the same fate as most geography courses drawing, as it did, from a student population "who had trouble reading and writing, and who didn't fit the traditional scholarly model." A conversation between White and Shriver led to school board action establishing a new world geography course for Chicago schools.

Several factors prevented this attempt at curriculum reform from succeeding. First, there were inadequate teaching materials for the teachers to use. The second but more significant factor was that Chicago schools did not have enough qualified teachers. This failure eventually led to a joint suggestion by Kohn and White that the Association of American Geographers (AAG) and the National Council for Geographic Education (NCGE) form a special joint committee to explore ways in which geographic education could be improved. The Joint Committee was authorized

at the 1961 meeting of the AAG in Pittsburgh. White became co-chairman, representing NCGE, along with Kohn, representing AAG. All seven members of the Committee agreed that there was an urgent need to upgrade the quality of teaching materials. After the Committee prepared some preliminary ideas, a proposal was submitted to the Ford Foundation's Fund for the Advancement of Education. The proposal was funded for $55,000 and, with these resources, the High School Geography Project came into being (White interview, May 5, 1970). White's role in the Project's history did not stop with this early committee. He subsequently became chairman of the High School Geography Project's Steering Committee, a position he held until August 1970, when the Project was officially terminated.

A Question of Definition. From the beginning of the High School Geography Project, the unique nature of geography prevented the Joint Committee from following the pattern established by the earlier curriculum reform projects. The School Mathematics Study Group grew out of a two-day conference sponsored by the American Mathematical Society in 1958 (Goodlad 1966, pp. 11-13). Within a year of its first steering committee meeting in February 1959, the Education Committee of the American Institute of Biological Sciences had agreed that the Biological Science Curriculum Study would have three versions in its proposed tenth-grade biology course (Grobman 1969, p.15). Reed College in Portland, Oregon, hosted a meeting of chemists in 1957, and in a period of four summers, the Chemical Bond Approach Project curriculum was in the hands of high school chemistry students (Goodlad 1966, p.44). A similar consensus on the nature of geography as a high school curriculum proved much more difficult to achieve.

The natural sciences had fairly clear-cut conceptual structures and methodology. The history of geography, as a school subject, suggests anything but agreement on geographic concepts and methodology. The regional-spatial dichotomy continued to separate geographers. Nor was there agreement on the phenomena of geography. Is it physical, biological, social, or a combination of all three? A restatement of these questions evolved into the electric proposition that geography, in the final

analysis could only be defined in terms of what geographers do. This proposition, unfortunately, provided very little focus and direction for the Project.

It was a long difficult four years before the High School Geography Project could settle on the organizational theme that the curriculum finally would follow. Not only were many views of geography popular at the time the Project started, but these diverse viewpoints were all represented to one degree or another by members of the Project's Steering Committee. Since the Steering Committee was never an honorary group of elder geographers, but an active policy-making body, these differing viewpoints could not be ignored.* The power and diversity of this committee provided the Project with a constant source of ideas growing out of its spirited dialogue. It did not, however, provide the Project with a convenient and simple definition of position. This was to be the task of a position paper and phase one of the Project.

Twin Concerns. It is far easier for a group to agree on what they are against than on what they are for. Concern for the academic discipline as school subject was undoubtedly an important consideration in the early planning stages of the Project. Concern for the rather sad state of geographic knowledge in the U.S. was another. The AAG and NCGE represented both these concerns in the instructions they gave the Joint Committee at the outset of the Project. The Joint Committee was instructed to:

> 1. recommend practical steps to be taken in improving the status of geography in education.
> 2. find means of putting into effect these recommendations.
> 3. work closely with other educational organizations to promote geography as a discipline, particularly in the secondary school system (AAG proposal 1968-1970).

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*The Steering Committee's powers included:

1. Appointing the project director and senior personnel.
2. Preparing a detailed budget.
3. Determining expenditures within the approved budget.
4. Making of policy decisions on overall philosophy and approach.
5. Advising the project director and staff on course content, kinds of materials to be developed, the required writing based on feedback from evaluation studies as well as on other scientific and educational methodological matters related to the Project.
6. Reporting to the Council [of the AAG] and the National Science Foundation [which took over the funding of the Project in 1964] on the overall status and progress of the Project (AAG to NSF 1968-1970).

These twin concerns for the discipline and for geographic illiteracy in the U.S. was voiced by Kohn when, in describing the early development of the Project, he used a quote from Paul Woodring as fitting "preamble" to the High School Geography Project:

> Of all the academic subjects that every civilized human being ought to learn well, geography is the most neglected in American colleges and schools. Many senior high schools do not teach the subject at all, and many colleges offer it only as an elective for a few students who plan to go on to graduate school to become professional geographers. Yet it seems obvious that the need for geographic knowledge grows as our planet shrinks, as people travel more, and as we are brought into even greater dependence on the people of other lands (Woodring, *Pittsburgh Post Gazette*, June 29, 1959; quoted in Kohn 1964, p.vii).

There was sufficient evidence to support the Woodring contention that Americans knew little about people in other lands. A survey conducted by the United Press International in the early sixties found that the state of geographic knowledge in America left much to be desired. When asked where Laos was, an elderly couple in Las Vegas replied, "We wouldn't have the slightest ideas--we're only visiting here ourselves." In the same survey, a Hollywood man thought Laos was a city in Thailand, and a Brooklynite dismissed the entire interview because he was "absolutely neutral" (White 1962, p.1). The results of this survey were particularly distressing to geographers since it was conducted at the height of the Laotian crisis.

Based on a survey conducted at the University of Pennsylvania in 1964, Joseph E. Schwartz identified the schools as a primary source of geographical ignorance. The 100 subjects of his study were randomly selected from the university student body and were asked to locate places on a blank map provided by the researchers. Of the students, 47 percent could not locate Viet Nam, 76 percent could not find Yemen, 50 percent had trouble with both Hungary and Bolivia, and to 77 percent of the students, Angola was a complete mystery (cited in "Off the Map," 1964). Marion Levy, a Princeton sociologist, indicated that this lack of geographic understanding was a uniquely American phenomenon when he remarked that he could always tell the difference between foreign and American graduate students in the social sciences by asking some elementary

questions in geography (cited in Mayer 1962, p.28). White supported this view when he wrote,

> as a nation we are geographically illiterate. . . . Among the "Summit" Powers, the United States is the only nation that does not offer all its students of high school age substantial training in geography. Two, three, or four years of intensive study are common in those countries. In this country, geography is taught as a separate subject in only a small proportion of the high schools (White 1962, p.1).

The unity of sentiment concerning the state of geographic education found its way into all of the funding proposals made in behalf of the Project. It was the same unity of sentiment that led NCGE to conclude that too few schools offer too little geography to too few students (*The Status of Geography...* 1965, p.12).

Competing Interpretations

In the first year of its existence, White described the immediate purpose of the Project as producing a "high school course which could be provided on tape for use with film and on television" (White 1961, p.358). The demonstration course was to be based on guidelines established by the Joint Committee and authored by classroom teachers. This demonstration course was never developed and, in fact, the final course represented a completely different interpretation of what constitutes a good curriculum. This goal reversal shows that there were very different views impinging on the Project. It also shows how the Project grew in its experience and how the Project's objectives changed to reflect that growth.

Divisions Within the Steering Committee. Agreement about how the purposes of the Project would be translated into a high school curriculum proved much more difficult to reach than agreement about why the curriculum should be developed. Two fundamental divisions within the Steering Committee were evident almost from the beginning. The first concerned the nature of geography itself. The traditional dichotomy between geography as a natural and a social science appeared within the Steering Committee. A second division developed later and proved to be the most difficult and persistent one faced by the Committee. It centered on the question of whether the materials should be based on a regional approach or a spatial and thematic one.

The first division was handled very skillfully by William D. Pattison,

the first director of the Project. Pattison was a product of the University of Chicago, and although not a colleague of White's until the late sixties, Pattison did represent a view of geography shared by White and typical of the Chicago tradition. He presented a paper entitled "The Four Traditions of Geography" to the NCGE annual convention in 1963, identifying four positions that have, at one time or another, dominated the field. Instead of insisting that geography was a natural or a social science, Pattison implied that it was both and suggested that all four of his identified research traditions had legitimate questions to ask of the subject. This same type of interpretation had appeared in Hartshorne's earlier monograph (1959) for the AAG, which stressed both the human and the natural tradition of geography.

The almost parallel development of the High School Geography Project and the Earth Science Curriculum Project also helped clarify the question of whether the Project's geography was to have a social or a physical orientation. Through very close contact, at first through the Project's Steering Committee and later through physical proximity of the two projects in Boulder, Colorado, it came to be recognized that earth science covered the physical aspects of geography. To complement rather than duplicate the Earth Science Curriculum Project's effort, the High School Geography Project limited the treatment of physical geography primarily to the way it affected man's settlement activity (Richburg interview, June 8, 1970).

The second division was at least partially reconciled by a decision to focus on what geographers share rather than on what divides them. An eclectic notion "the geographer's way" became the organizing framework upon which many of the early efforts of the project were based. McNee, who coined the term "geographer's way," described this concept as one centering on the various unifying elements that bind together the geographical sciences. Research is one of these unifying factors. Each of the research traditions of geography provides a unique area of exploration. Geographers, however, approach these areas using similar tools and thus read the same journals, attend the same conventions, and have a common basis of communication. Geographers share common values such as an affinity for maps, a respect for field study, and a tendency to

see elements in relationship to wholes (McNee in Morrissett 1967, pp. 57-63).

The "geographer's way" suggested some agreement on the processes of the discipline, but it did not suggest agreement on its content. Hindsight would indicate that a spatial approach to geography emerged very early in the Project's plans and went on to characterize the final product that was placed in the hands of geography students. However, this is much too simple an explanation and ignores a great deal that happened in the early years of the Project.

The Advisory and Response Papers. The experience of earlier curriculum projects undoubtedly influenced the early direction of the High School Geography Project. White had been spending his summers in Boulder, Colorado, since about 1959; hence, he was aware of the efforts being made by the two projects located there, the Biological Sciences Curriculum Study and the Earth Science Curriculum Project.

When asked where the idea of an advisory paper originated, White was not exactly sure, but explained:

> Certainly some of us who had studied what was happening in curricular reform projects recognized that there were various positions among the participants in other projects. I have seen blood running in the streets of Boulder among participants in the Biology Curriculum Study which led, as you know, to three different courses. . . . Some of us felt that it would be desirable to see if we could achieve some reconciliation of professional views before we got into the position of designing the course. That is what the position paper was designed to do (White interview, May 5, 1970).

The *Advisory Paper* was published in August 1962. It represented the first year of the Project's work. Among other things, the authors explored the field of geography, elicited opinions on basic ideas and skills suited to secondary education, and compiled it all into this 75-page paper. Of his four broad traditions of geographic thought, Pattison viewed the *Advisory Paper* as representing a spatial tradition, having as its main concern a content centered around geometry and movement (*Geography and Map Division Bulletin Number 50*, 1962, p.3). The objectives of the *Advisory Paper* were summarized by Pattison as a way to instill in both teacher and student:

> 1. respect for objective methods of investigation, heightened awareness of special factors and elements of the natural environment, and reinforced application of the world-wide interdependence of

societies.

2. understanding of the ideas involved in mapping, in regionalizing, in the analysis of man-made relations, and in the interpretation of spatial relations.

3. knowledge of major "world patterns" (the distribution of significant physical, economic, and political features and the paths of movement sustaining these distributions; also knowledge of specific place locations and the content of specific areas).

4. knowledge of reliable sources of geographic information.

5. ability to read and interpret maps, to handle a geographic vocabulary, and to participate creatively in the geographic enterprise (Pattison 1962, p.368).

Ten experimenting teachers, along with 20 cooperating teachers, were to work with the concepts and skills set forth in the *Advisory Paper*. They were asked to create units of instruction that would eventually become the High School Geography Project's curriculum.

At a final conference of the Project's participants in August 1963, a "response" to the *Advisory Paper* was presented (*Response Paper*...1963). It summarized the *Advisory Paper* and the work done the preceding year by the teachers associated with the Project. The bulk of the paper came from the ten experimenting teachers, who had worked in close cooperation over the year with their university counterparts and produced numerous unit reports. The bulk of these reports followed the format established in the *Advisory Paper*, which asked for:

Unit Design, including objectives, readings, and assigned activities;

Materials: an account not only of materials created for the unit but also of those purchased or borrowed, and of those needed for further improvement of the unit;

Identification of the specific project-sponsored ideas given a tryout in the unit;

Evaluation program: an account of all the means used to test the effectiveness of the unit, a copy of each exam given, and a record of exam results;

Overall appraisal by the teacher (*Response Paper*...1963, p.2).

These unit reports were buttressed by logs summarizing each day's lessons and by correspondence to the Project office from the teachers and from Henry Warman, the Project's geographer in the field, who spent six months visiting the various teachers. The work done by the 20

cooperating teachers was not ambitious and, outside of the direct contribution of several exceptional teachers, the impact of this group was general rather than specific in nature.

The *Response Paper* was developed during the summer of 1963. In the first writing session, extending from June 3 to 9 in Chicago, the experimenting teachers set down their experiences in writing, the results of which became the body of the *Response Paper* itself. The cooperating teachers met from July 10 to 14; their contribution took the form of committee reports and statements, which were also summarized in the *Response Paper* (1963, pp. 6-7).

The results of the earlier meetings were the basis of the final Denver conference in late August, which ended the second year of the project. In attendance at this meeting were eight members of the Joint Committee, seven of the Project's consulting geographers, and three teachers. Although there was disagreement about many points in the *Response Paper*, the role of the teachers during the year was thought to be important and distinctive. Equally important was a consensus of opinion giving support to the role of the student as an active agent, rather than a passive recipient, in the learning process. Student motivation was related closely to student activity, and both were factors to be taken account of in any future curriculum development.

The *Advisory Paper*, the *Response Paper*, and the August 1963 conference based on them had failed to unify the geographers on a design for a high school curriculum. This was made evident in the proceedings of the second day of the conference. Far from being a unifying force in the geographic community, there were as many different interpretations of the *Advisory Paper* as there were teams of experimenting teachers and geographers. The *Response Paper* did little more than summarize the initial attempts at curriculum construction. The debate that accompanied the presentation of the *Response Paper* indicated that, although the "geographer's way" was a guiding principle of the *Advisory Paper*, each teacher-geographer team translated the "geographer's way" differently.

Pattison identified four basic divisions among the assembly. The first, he described as the "Whitaker position," favoring a "world patterns" course (a regional approach set forth by Russell Whitaker some 15 years

earlier), supported by Preston James, Hewell Phelps, and half the assembled conferees. The second position was the "McNee position" favoring a "concept-centered course." This was supported by Robert McNee and his teacher advisee, Herbert Friedman. The third point of view was the "Ginsburg position" espoused by Norton Ginsburg, which stressed "local studies" as the primary concern of high school curriculum. The final position was represented by only one experimenting teacher, John Neal, who advocated a "social studies position." His view placed social problems as the major organizer of the curriculum, and, though not current at the conference, his position represented the view of thousands of social studies teachers who would, in the final analysis, be using the Project's materials.

In ending the conference, Pattison announced his resignation as director of the Project, noting that he had failed to hold the Project to the spatial orientation of the *Advisory Paper* (Memorandum to Steering Committee from Pattison, Sept. 1, 1963). The final course material was spatial in orientation and would seem to vindicate the spatial position held initially by Pattison and expressed in the *Advisory Paper*. This is hindsight, however, for in August 1963 the direction of the Project and the tradition of geography it espoused were still very much open questions. The mass of accumulated data from the experimental teachers had failed to provide the necessary answers.

The Role of the Funding Agencies. The philosophies of the funding agencies were very important in dictating the direction that many of the curriculum projects would take. In this respect, the High School Geography Project proved to be no exception. When asked to explain why the direction toward a television course was taken, Pattison stated that Ford's Fund for the Advancement of Education was funding that type of project at the time. He gave the Chemical Education Materials Study as an example of a project that developed films that were produced commercially and won several coveted awards. The American Institute of Biological Sciences intended, as well, to use film and televised instruction as its primary mode of presentation for the Biological Sciences Curriculum Study (Grobman 1969, pp. 8-9).

Pattison's remarks were in a rather sharp contrast to the

then-existing philosophy of the Ford Foundation and the National Science Foundation. At the time, Ford was more interested in the "education" half of "geographic education." This helps explain why the AAG allied with NCGE (Pattison interview, June 15, 1970). NCGE embodied a general education perspective and its *Journal of Geography* was the only geographic journal devoted primarily to the problems of education.

The Ford Foundation, however, was not disposed to continue funding a project based on a single discipline (Letter to Kohn from Eurich, Feb. 25, 1963). The National Science Foundation (NSF), on the other hand, was science oriented to and very much interested in a discipline approach to curriculum construction. When it undertook funding of the Project in 1964, the discipline orientation of the Project was reinforced. The Joint Committee was dissolved and NCGE was dropped as a Project sponsor. White continued as chairman of the new Steering Committee and stressed geographic scholarship in the selection of the Committee's members. White's reputation as a scientist was recognized in 1962 when he was elected president of the AAG. The effect of the affiliation between the AAG and NSF was to entrust the Project to subject-matter specialists rather than to geographers typically associated with social studies education.

The importance of the various funding agencies cannot be underestimated in understanding the history of any of the curriculum development projects. While under the financial control of first the Fund for the Advancement of Education and later NSF, the Project assimilated the values of both organizations. Some type of societal goals must give impetus and direction to curriculum construction; but because the goals of U.S. education are not specific, there was a great deal of freedom within the funding agencies to translate these goals into any type of curriculum the foundations felt appropriate.

The Ford Foundation values found expression in the *Advisory* and *Response Papers*. The alternatives suggested through this early experimentation, however, provided the Project with a basis for choice. When the realities of funding dictated that the sponsoring agency would have to be NSF, the Project chose a new curriculum design in tune with the orientation of the new funding agency. The decision indicated that in 1964 the Project leadership was operating under a different value system

and under a different set of curriculum assumptions than it had in 1961.

Although important, the values of the funding agency were not the only ones reflected in the Project's early design. In the final report of the Project, Pattison stressed what he called the "guidance imperative." In explaining the term, Pattison talked about the helmsmanship of Gilbert White (Pattison in Patton 1970, pp. 58-60). White's values were reflected in the Project's proposal to NSF as well as the values then emerging from the wider curriculum reform movement. The thing to keep in mind when looking at the various values which influenced the High School Geography Project is that these values were never static. The dynamics of the curriculum development process are reflected in the constant change and reinterpretation of these diverse value systems.

The Period of Transition

The year 1964 was an important one for the High School Geography Project. With the *Response Paper* in 1963, the first two phases of the Project were completed and so was the association with the Ford Foundation's Fund for the Advancement of Education. During the interim period, two funding proposals were made to NSF. The first proposal was authored by Kohn. It requested several million dollars to establish a major curriculum development center at the University of Iowa and subcenters around the country that would regionalize the Project's curriculum efforts. This proposal would have provided a continuity with the earlier phase of the Project and given impetus to the development of the taped or filmed "demonstration" course (Patton 1970, p.63). The fact that the first proposal was not funded underscores the value differences within the original Joint Committee and between the Ford Foundation and NSF.

White had been in England when the initial proposal was submitted. Upon his return, he completely rewrote it. This time it was much closer to the type of program favored by NSF. Pattison attributed its success to a provision within the proposal giving research geographers, rather than a content editor, the major role in the Project's curriculum design (Pattison in Patton 1970, p.63). In April 1964, NSF awarded a grant of $160,140 to the AAG as the parent group in charge of the project.

Responsibility for leadership was given to a Steering Committee appointed by the Council of the AAG. Of the 11 Steering Committee members selected, five had been associated with the earlier phase of the Project, three as Joint Committee members, one as director, and one as a geographer-consultant for the classroom trials. White continued as chairman of the new committee.

In late April, Nicholas Helburn was selected as the new director. With his appointment, Project headquarters shifted from Los Angeles, California, to Bozeman, Montana. Helburn's official duties began September 1, and White filled in during the interim.

A Search for Structure

With the beginnings of its formal operations in 1964, the Project took a completely different direction. By rejecting the University of Iowa approach, the Project was saying the format and authorship of its materials did not rest with advisory guidelines and teacher-made units. Pattison sampled these materials and advised that they be studied, but with few exceptions this was never done (Kohn interview, June 14, 1970). The break between the Ford Foundation era and the NSF era was fairly sharp. The proposal that was funded suggested the format and authorship of the course would come from the discipline of geography and its academic practitioners.

The structure of any discipline is a convenient organizing tool in the development of curriculum. The successful experiences of the Biological Sciences Curriculum Study, the Earth Science Curriculum Project, and other curriculum groups that used a discipline structure as organizer undoubtedly weighed heavily on the decision to explore the work being done by Edwin Thomas of Arizona State University. Thomas was invited to present his structure of the discipline approach at the October 1964 Steering Committee meeting in Chicago. The Committee was impressed by his work and granted him $9,000 to revise, implement, and evaluate his program in trials at a Phoenix, Arizona, high school (*Report to the AAG*...Dec. 1, 1964). At the time, the Committee did not know for sure if Thomas' material would be used as a separate unit or spread throughout the course. As it worked out, the materials were printed; they were given school trials; but they were never used. This initial search for structure became little more than a by-product of the Project's early search for direction. Pattison's comment

on why the Thomas unit was never used as the course structure was insightful. He agreed that the thinking involved in the Thomas outline did conform to what NSF wanted--but not entirely. Structure of the disciplines was something the natural scientists had been living with for years. In contrast, many educators, after reading Bruner, "struck up bands and carried the idea of structure to extremes" (Pattison interview, June 15, 1970). Structure was part of the NSF value system but so was the value of free inquiry. Neither NSF nor the Project leadership were comfortable with a course outline based on programmed learning and a predetermined structure of the discipline. To underscore this uneasiness, Pattison gave yet another reason to explain the unit's failure. The unit, according to Pattison was a conscious or unconscious effort by Thomas to impose his view of geography on the profession. Both the extreme spatialists, on the one hand, and their regional counterparts, on the other, saw the Project as a possible way of influencing the broad field of geography. The regional position already had been defined for the schools by Preston James in the 19th yearbook of the National Council for the Social Studies (*New Viewpoints in Geography*, 1959). Pattison attributes the fact that the Project adopted neither of these extremes to White, who was less interested in defining geography professionally than in developing a set of teachable course materials (Pattison interview, June 15, 1970). The extreme positions gave way in compromise to a unit-structure approach put forward by Robert McNee and eventually described in the *Settlement Theme Course Outline* (May 1966).

A Unit Approach. The attempts to establish an overall course outline by-passing the structure-of-the-discipline question proved in the long run to be successful. Helburn assumed the responsibility for the course outline as a legitimate function of the staff in conjunction with the Steering Committee. In support of the outline position, Helburn stated that without it, the Project would be open to the charge that it had no unifying theme and that it could not present a unified package of materials upon completion of the course. In his final argument he suggested that the real challenge of the course outline would be to treat each geographic principle or hypothesis separately while at the same time structuring the course so that one understanding would build upon another

(Memorandum to Steering Committee from Helburn, Sept. 28, 1964).

The argument in favor of the outline approach was persuasive, for the recommendations of the Chicago meeting stated that each Steering Committee member would prepare one or more outlines to be distributed and discussed at the next Committee meeting in December (Minutes of Steering Committee Meeting, Oct. 16-18, 1964). At the December meeting, it was agreed that the settlement outline by McNee would be the course outline. The remaining outlines were to be expanded and included in a book of outlines to be published later (Minutes of Steering Committee Meeting, Dec. 29-30, 1964). Although the spatial approach was agreed upon for the first course, it was fully expected by most members of the Steering Committee that a regional course would eventually be undertaken (Kohn interview, June 14, 1970). This book of outlines was never published, nor for that matter was the regional course, but the McNee outline, through its many revisions, came to be the guiding document for the initial course materials.

The Emergence of a Curriculum Development Model

The Project was committed by its funding proposal to assign the major task of curriculum writing to research geographers. The settlement theme outline provided broad guidelines the authors were to follow, but the question of how the writing would be coordinated had to be answered. The possibility of establishing a writing conference along the lines of the Biological Sciences Curriculum Study and the Earth Science Curriculum Project was explored during the summer of 1964. Because three geographers, H. Bowman Hawkes, David H. Miller, and Douglas Carter, were participants in the Earth Science Curriculum Project writing conference, White asked them to report to the Steering Committee on their experiences with the writing conference approach to curriculum development (Memorandum to Steering Committee from Helburn, Oct. 5, 1964).

The format that the Earth Science Curriculum Project followed was to assemble 30 writers during the summer to produce a textbook, a teacher's guide, and a laboratory manual. The writers were given a list of seven conceptual schemes and ten themes determined in earlier conferences to represent the structure of the subject. They were to adhere to these

outlines while developing chapters that represented their specialized fields. The conference approach places great emphasis on communication among authors and editorial staff. All were expected to make written reviews of each chapter. The original drafts were to be completed in ten days. Then, ten science teachers in the writing groups were to pass on such pedogogical matters as strategies, teachability, and student interest. The completed versions were to be ready for the printer by the end of the summer (Memorandum to Steering Committee from Helburn, Nov. 4, 1964).

The reason that the writing conference approach was never adopted was not made explicit in any of the newsletters, minutes, or project correspondence. The Steering Committee meeting of October 1964 approved White's action of asking for the Earth Science Curriculum Project reports, but the minutes of the December meeting did not mention the reports. The reports themselves were favorable toward the approach used by the Earth Science Curriculum Project, although two of the three respondents commented that the role of the teacher in the writing of the material was rather limited (Memorandum to Steering Committee from Helburn, Nov. 4, 1964).

When asked in retrospect why the writing conference approach was abandoned, McNee said that the quality of authors was a major consideration. He indicated that, had the project forced the authors to move to Boulder, the better authors with other job commitments would not be chosen (McNee interview, June 15, 1970). Helburn attributed it to the time, often spanning months, that authors needed to be creative and try the materials in different situations before they were formalized into print (Comments by Helburn at Steering Committee Meeting, June 16, 1970--recorded by author, who attended as an observer). White stated that the Committee wanted "more leisurely and explicit collaboration between professional geographers and people like teachers and psychologists in the education profession (White interview, May 5, 1970). These interpretations were consistent with the existing value system of NSF, which placed the academician in the central role in curriculum development. It was consistent as well with the actions of the Steering Committee in its December meeting. By that meeting, the idea of assigning units to

individual authors was an accomplished fact.

As early as July 1964, the Steering Committee sent out to leading urban geographers a statement regarding a proposed unit on urban geography. The initial request was followed in September by a personal letter from Helburn seeking the geographers' disposition toward the described unit. Out of this second contact came the Thomas materials dealing with the structure of the discipline. Although his unit did not deal with urban geography, Thomas was allowed to continue because his structure approach was already well under way. The two likeliest authors for the urban unit were Ronald Boyce and Arthur Getis. The Steering Committee reviewed unit outlines submitted by both and after considerable debate chose Getis (Memorandum to Steering Committee from Helburn, Oct. 4, 1964).

Later the Steering Committee invited geographers to submit prospectuses for a unit dealing with water resources. Douglas Carter, who had previously worked with the Earth Science Curriculum Project, presented an outline which was discussed and approved at the December Committee meeting (Minutes of Steering Committee Meeting, Dec. 29-30, 1964). Both the urban and water units became prototype materials. Both met the settlement theme outline, which was approved at the same December meeting. And the developmental approach envisioned for both set the basic procedural pattern for the Project. By the close of 1964, the Project had a basic content outline and the beginnings of its development model. Development of the course materials could finally begin.

Chapter 2

The Elaboration of the Curriculum Model and The Evolution of the Development Process Model

The basic lines of the Project's direction were set at the December 1964 Steering Committee's meeting. But there were still many issues to be resolved. Work began on the urban and water resources units in early 1965. Through the Project's experiences with these two units, the details of its curriculum model and developmental process evolved.

Although the settlement theme outline gave basic guidance about the content and structure of the curriculum, many questions were left unanswered by it. These were questions about the relationships between curriculum and society, the role of the learner, and learning theories and strategies. The matter of content and its structure, too, continued to be a subject of debate. The development of the urban unit (which became a positive example that guided subsequent development of other units) and the water resources unit (which became a negative example the Project determined not to follow) provided opportunity to work out the answers to these questions.

At the same time these curriculum issues were being worked through, the developmental process was taking form. The model that eventually evolved consisted of the following steps:

1) *Unit developed* by geographers, teachers, and educationists
2) *Unit taught* in school trials in locality of geographer-teacher-educationist development team
3) *Unit revised* by development team
4) *Prototype unit produced* by Project staff
5) *Unit tested* in selected schools around U.S.
6) *Unit edited* by Project staff using trials feedback
7) *Provisional unit produced* by Project staff
8) *Unit tested* in selected schools around U.S.
9) *Unit edited* by Project staff using trials feedback
10) *Final version produced* by Project staff with assistance from Macmillan Company

11) *Final version turned over* to Macmillan Company for commercial production

12) *Commercial version published* by Macmillan Company

The growth of this pattern, of course, involved many false starts and wasted motions, as did the growth of the curriculum model that was eventually followed.

The evolution of the curriculum model and the evolution of the first three steps--the conceptualization steps--of the developmental process model were closely intertwined during the work on the two early units. This chapter will examine the development of the curriculum model and the first three steps of the developmental model. The later steps of the developmental process, which emphasize evaluation more than conceptualization, will be the focus of Chapter 3.

A Classroom Scene

> In 1851 the coastline of Puget Sound was as devoid of the results of human activity as the shaded, but blank, topographic map called "Portsville." The ninth-grade class puzzled over this map for a moment and then began to settle the first immigrants, who, according to their previous reading, had come from Illinois overland to Portland, and then by ship northward to the wilderness area.
>
> The argument over where to locate the townsite of Portsville was never settled conclusively. Students in favor of the windward peninsula were intimidated by the majority opinion that the location lacked protection against the Indians. The logical place for a fortified site was the northern headland, which, after a great deal of debate, was rejected as the townsite on the grounds that once the headland was logged, the livelihood of the settlers would be threatened.
>
> One group of students advocated settlement near the river's mouth. Its members were silenced by the terse comment of one boy that tidal flats are not only unhealthy, but when the tide is out, ships cannot come within two miles of the proposed settlement.
>
> The dissidents holding out for a freshwater location on Lake Wiley had delusions of a booming tourist trade. Then other students pointed out the facts of limited population and limited transportation, and that Portsville was being settled in the winter of 1851. This was enough to dampen even the most enthusiastic dreams of motor boats and water skiing (Pratt 1969-1970, pp. 3-4).

This ninth-grade class at Bowdish Junior High School in Spokane, Washington, was one of the classes used in the 1967-1968 limited school trials of the Project's experimental unit, *The Growth of Cities*. Implicit in the dialogue of these students is a view of curriculum that is quite different from the one generally found in schools. The areas of difference are in how the curriculum views society and its goals, the learner and his interests, the content and its structure, and finally the learning theory and strategies needed to translate curriculum objectives into student behavior.

Curriculum and Society

In the history of education, the goal of curriculum has been considered to be the preparation of students to cope better with their problem-filled environment. How the curriculum accomplishes this has been a function of how man has traditionally viewed himself and his society. With the advent of the Progressive Era and the instrumentalist philosophy of John Dewey, the most persistent rationale for social studies curriculum has been to prepare students for responsible citizenship. The urban unit of the High School Geography Project proved to be no exception. The introduction to the first version of the urban unit stated:

> Cities have always been the focus of the finest in national culture, and just as often they have been a center for what is evil and unjust. There can be little doubt that, in this country, they will increase in importance as time goes on. More people will move into urban areas. New and greater problems will arise, urgently demanding wise solution . . . If education is to lead to a heightened self-understanding through attention to the problems of the present and the future, the study of urban geography has a significant contribution to make toward that end (Getis and Getis 1965, p.iv).

The statement above differs little in sentiment from the statements made in introductory sections of most social studies curriculum materials. The real test of the consistency of any rationale comes when it is translated through the curriculum into student behavior. The class at Bowdish

Junior High School was determining the site of what would become a large urban center. As the students developed the city of Portsville, they experienced the problems characteristically faced by people living in any urban environment. The Bowdish students were actively, creatively, and constructively applying the ideas and methodology of the geographer to the problem of settlement in 1851 and after. By doing so, they were developing their intellectual powers to make finer judgments, more thoughtful discriminations, and wiser human decisions, which it was hoped would transcend the model of settlement expressed in Portsville and relate to the problems faced in everyday urban life. In essence then, this is the assumption that underlies the Getis definition of citizenship. The assumption shaped Arthur and Judy Getises' definition of their subject-matter field and their expectations for student behavior.

Although the authors of most social studies curriculum materials state that responsible citizenship is the major goal of their materials, the ultimate behavioral outcomes of this goal can take very different directions. Alan Tom has identified four different outcomes that characterize most of the social studies material he has analyzed (Tom 1969, p.54). The first outcome of social studies instruction described by Tom is the "scholarly man." Approaches aiming at the development of "scholarly man" stress content and are based on the view that one becomes a good citizen to the degree that one knows certain content. A second category of curriculum outcomes is "investigating man." This type of student behavior is closely related to the "scholarly" type, in that both categories emphasize intellect. "Investigating man" emphasizes the process of inquiry, taking direction from Jerome Bruner's work.

The rationale for the High School Geography Project generally, and for the urban unit specifically, rests in this second Tom classification. McNee, as author of the settlement theme outline stated that "the principal objective of a geography course should be to communicate 'the geographer's way.' In short, I am a Brunerite" (McNee in Morrissett 1967, p.57). [As a point of contrast, Tom's third and fourth classifications of outcomes included the "public man" as decision maker and the "public man" as possessor of moral truth (Tom 1969, p.54).]

A vast qualitative difference separates the "intellectual man"

typical of traditional social studies courses and the "investigating intellectual man" characteristic of the High School Geography Project. This, in part, is why the Bowdish students behaved differently from students in a typical social studies class. Their behavior was a reflection of a very specific view of what society is and of how geographical understanding can bring greater meaning to it. When asked if he had a formal philosophy of education at the outset of developing the urban unit, Arthur Getis admitted that he did not. Although he had read both educational philosophy and learning theory, his own philosophy was ultimately developed as a result of working with the urban unit (A. Getis interview, June 14, 1970).

Curriculum and the Learner

Concern for geographic scholarship existed full blown from the outset of the Project. Concern for the learner, on the other hand, grew simultaneously with the development of the course materials.

Throughout most of the Project's history, a sound background in geography was an essential criterion for membership on the Project team. Not only was this true of the Steering Committee but also of the first two Project directors and all the authors assigned to construct units. Arthur Getis, for example, majored in geography as an undergraduate at Pennsylvania State University, received his masters in geography at the same institution, and then completed his doctorate in geography at the University of Washington in 1961. His teaching and field experience since 1961 indicated that he was, in every sense of the word, a professional geographer. When asked how he became interested in geographic education, Getis stated that he was never interested beyond what would be normal for a concerned citizen. His interest in curriculum came from Helburn, who generated enthusiasm over the possibility of a truly revolutionary approach to high school geography (A. Getis interview, June 14, 1970). This enthusiasm was contagious, as was demonstrated, in the type of materials that the Getises developed. By the time the prospectus for the first unit was written, Arthur Getis had sharpened his view of students and learning enough to state:

It should be emphasized that our concern in this unit

> is primarily with leading the student to a comprehension of the nature of cities. The understanding and interpretation of concepts will be stressed, and facts will be introduced in this light. It is less important for the student to be able to recite the 20 largest cities of the world than to understand why there are such agglomerations of popuation (A. Getis 1964, p.2).

Concern for the learner in the development of project materials was germinal in the initial outlines presented at the December 1964 Steering Committee meeting. This concern evolved from a "mere consideration" in the early stages of the materials development to an overriding focus toward the end of the development cycle. The Project's student orientation developed as geography became increasingly interpreted as process to be experienced rather than facts to be learned.

A Commitment to Inquiry. The developmental phase of the urban unit began at the December 1964 Steering Committee meeting. The debate that accompanied the presentation of the Getis unit outline centered on two topics. Because the outline was developed parallel with, rather than subsequent to, the overriding settlement theme outline, the question of integration of both the urban unit and the water resources outline with the larger theme outline was debated at length. The other focus of the debate was the needs of the learner. The committee demonstrated concern for the vital area of student interest and motivation when it strongly suggested that "games" be made a part of each unit. The committee also requested that the Getises consult the leaders in the field of instructional theory and methodology to make the unit outlines more teachable (Minutes of Steering Committee Meeting, Dec. 29-30, 1964).

Although not recorded in the minutes of the meeting, several of the Committee members had a negative attitude toward the Getis prospectus. Central to the criticism was the way in which the rather esoteric concepts listed in the outline would be communicated to students. The outline was criticized for lacking imagination and the debate suggested two important elements that would be central throughout the project's history. One was that the Steering Committee had high standards for its settlement theme course, and the other was that their course would be very different from anything that then existed in geographic education (Kurfman interview, June 2, 1970).

It is not surprising, considering the criticism, that three months later the Getises completely revised their approach to the urban unit. Although reluctant to change, their feelings were that in the "interests of the Steering Committee's perceived objectives," which the Getises claimed were not always communicated to the unit authors, a completely new approach to the unit would be in order. Their new approach was still based on concepts such as site, nodal region, sequent occupance, and accessibility. To transmit these concepts to the learner, the Getises developed what they called the "model," which they described as follows:

> . . . a large shaded relief map (preferably of metal) of a city's site before it was settled will be placed in the classroom. Through a series of stages, each stage ten years long, students will be asked to make decisions about where to place the cultural forms that were in reality erected during each particular stage. They will determine the site for the earliest settlements and place magnetic pieces representing buildings, roads, etc. For example, by the end of the first stage (decade), twenty houses, a saw mill, a church, and other things will be placed on the map (Letter to Helburn from A. Getis, March 17, 1965).

Once established in this new direction, Arthur and Judy Getis, in consultation with various colleagues, the Educational Testing Service, and a graduate assistant, Richard Veit, went on to construct the entire unit in a six-week period. The urban unit was tested in the spring of 1965 with 200 students in five different classrooms of the New Brunswick, New Jersey, area. On the basis of student and teacher reactions to those informal trials, the materials were revised and a prototype unit was made ready for a second and much more extensive tryout during the fall of the same year (*Educational Testing Service Evaluation Report*, March 5, 1966, p.2).

Activities and Objectives. The Portsville model and a commitment to student inquiry were important changes that took place between the original Getis outline and the first draft of the unit. There was an equally important change that took place between the first and the second drafts of the unit. This change involved the definition of "activities" that composed a unit and profoundly influenced the direction of the High School Geography Project. In the first draft of the unit, the Getises

worked under the assumption that each learning activity in the unit should teach one concept, which would be written as a behavioral objective. This was consistent with the current educational literature extolling the virtues of behavioral objectives. In this behavioral interpretation, the curriculum developers isolated the student behavior they wished to promote and wrote it in specific behavioral terms. They then ordered the content, media, and methods of the course to accomplish that change. Using this approach, the first draft of the urban unit had some 20 different student activities. "Portsville" dealt with several different geographical concepts and made up seven of the unit's 20 separately defined student activities.

In the second draft of the unit, the Getises reversed this approach and worked under the assumption that the learning activities could set the course content and objectives. This broadened definition of activity shifted attention from specific student behavior to the unique and distinctive aspects of the materials. Under this interpretation, the new urban unit had only seven activities of which "Portsville" was only one. In other words, the Getises defined their unit as a sequence of learning activities rather than a sequence of geographical concepts or specific behavioral objectives.

The Getises believed that an activity which required students to build a city would necessarily have some impact on the amount of urban geography they learned. They anticipated some of the educational outcomes, but many other outcomes were suggested only after the activity was tried by students and teachers in the classroom. They found that good objectives grow out of an interactive process among the authors, the teachers, the subject matter, and the students.

The importance of this new definition was picked up by the other Project authors and generalized to the entire course. Helburn realized, as the Getises had before him, the futility of exclusively treating one objective at a time. It became clear to Helburn that "every activity has multiple objectives" and that all of the potential outcomes of an activity might not become apparent until the activity was tried out and its results analyzed (Patton 1970, p.36). Thus, an activity analysis system was developed by the staff to help shape activity objectives on the basis of feedback from teachers, students, and geography consultants. The viability and interest of the resulting materials reflect this interactive process.

The Involvement of the Student. The Portsville model, and the subsequent ordering of the other unit activities around it, was an indication that the author had struck some sort of balance between the "needs of the subject matter" and the "needs of the learner." Pressure from outside sources, however, indicated that the balance was still not enough in the students' favor. Helburn, responding to the "new" Getis outline, suggested a minor revision--that an inductive rather than deductive approach be taken to the "density gradient" concept. The reason given for the requested change was that it is more exciting for the student to find the principle from readily available evidence than it is to be told the principle and then ask why it operates (Letter to A. Getis from Helburn, Feb. 15, 1965).

Another persistent and influential voice in favor of the student's interests was the Educational Testing Service, which was given the contract for formal evaluation. In its summary of recommendations after the 1965 limited school trials of the urban unit, five of its eight recommendations involved maintaining or dropping activities on the basis of how interested the students were in them (*Educational Testing Service Evaluation Report...*, Mar. 5, 1966, pp. 27-28). From this very first trial, student and teacher interest--which, incidentally, correlated very highly--became an increasingly important criterion for judging course materials. The high interest shown in the urban unit was also an important standard against which later units were judged (A. Getis interview, June 14, 1970). One staff member was concerned that the role of student interest may have become too important.

> There is a general goal of keeping the course interesting for the student. It is possible, in fact, that the goals of vigor and accuracy and some geography objectives have been sacrificed to this end. We have made an effort to use technology and strategies appropriate to the learning intended, but we have by no means put the learning intended as the only goal. This might be viewed as another project pendulum: the continuum runs from an old fashioned "learn Latin whether it is useless or not," to an also old fashioned "if he has a good day every day we think we're doing well." We seem to fall closer to the latter end than the former (Manheim 1967, p.12).

The Project made no attempt to list formally the needs of students or to call in educational psychologists for advice about how to meet these needs. Meeting the needs and interests of high school students seemed naturally to follow from curriculum materials that gave students an active role in their

own learning. This was a direct result of the Project's emphasis on learning activities and an evaluation system that brought student opinion to bear at various points in the Project's development model. When educational psychologists did consult on subsequent units, it was to insure that the high degree of student activity be continued.

Individual Differences. Individual student differences were another early concern. The initial Getis materials centered on six exercises which were to be carried out by the students during the three-week unit. Each exercise had three or four variations designed for students of different intellectual abilities and different urban backgrounds. Slow students were found to be able to handle the material, but the brighter students learned it even better (Minutes of Unit Authors' Co-ordinating Conference 1966).

The commitment to individual differences proved to be a personal one and did not become a general goal of the project. Helburn was deeply committed to allowing for individual differences and in 1966 described a position on the staff for a "special materials" person. According to Helburn:

> He would spend most of next fall and winter watching the effect of our materials on slow learners, disadvantaged youngsters, and kids with poor records in school. He would try to pick out those materials which seemed to catch the interest and participation of the bright underachievers. The following spring, summer, and year he would try to expand these sorts of materials into a "special" track (Memorandum to Steering Committee from Helburn, Feb. 18, 1966).

The National Science Foundation showed little enthusiasm for work done with disadvantaged students. Funding restrictions caused Helburn to reword the request by dropping the term "special students" and instead to use the term "bright underachievers." The position Helburn described was filled some 18 months later by George Davis. About the time Davis was getting his program underway, his job was cut in the interests of economy and in deference to the psychological complexity of underachievement. Helburn wondered if the latter concern was not really the "fear of tarnishing the academic respectability of the High School Geography Project" (Helburn 1970, p.11). Davis wondered if it was not simply a power

struggle where individuals interested in disadvantaged students lost out because of the AAG's apathy in the entire area (Davis interview, June 15, 1970). Possibly a group of professional geographers, constituted as they were as policy makers in a curriculum project, were reluctant to enter an area they did not understand and could not easily control. The most convincing argument was that Davis simply did not make a rigorous enough case for his program and, hence, failed to sell the Steering Committee on its usefulness. The upshot of the entire debate was that the materials would be geared to "the upper 60 to 70 per cent" (Helburn 1970, p.11). Provision was made in each unit for optional activities. The intent of these optional activities was related more to content enrichment than to individual student differences.

The Content and Its Structure

Tom identified four types of content which paralleled the four types of behavioral outcomes he saw as the products of curriculum. Social science knowledge is the content stressed in a curriculum focusing on the scholarly man. The content for the investigating man is "process," centering on ways of social science thinking. The urban unit stressed process in its activities. The Getises brought students into their curriculum by allowing them to function as geographers, thereby preserving their right to make decisions. The freedom to choose stimulated student interest and activity. Students could learn as much or more from their wrong decisions as they could from right ones. The geographic concepts and principles built into the activities were highlighted by the teacher when debriefing the activities. Treated in this way, geographic concepts and structures were internalized by students and used as more formal criteria by which one group of students judged the decisions made by other groups of students. Arthur Getis felt satisfied that the process-centered urban unit did not compromise the values he held as a research geographer. The unit showed that students who used the processes of the discipline could learn its content as well. Thus "scholarly man" and "investigating man" could be one and the same.

Experience had shown that the content of the "geographer's way" was more than the reasoned ordering of geographical concepts envisioned by

Thomas. Although the project retained many of Thomas' concepts, his materials were rejected because they emphasized product at the expense of process. Nor was the content of the "geographer's way" developed by teachers who developed course outlines using the *Advisory Paper*. Instead, the notion of the "geographer's way" was given substance by teams of university geographers, sometimes working with educational psychologists and always with secondary school teachers. Their content offerings were subjected to repeated trials in hundreds of classrooms by increasingly critical teachers and students. The content that survived was diverse, innovative, and based very much on an active, voluntary, process-centered approach.

Part of the credit for the "inquiry" emphasis in the course must go to Helburn. Pattison described Helburn's role in the Project as one of informant and exhorter:

> By letters, calls, and conversations, he promoted a project-wide sense of adventure, passing along the lessons of experience from author to author--especially, at first, lessons from the Getis's--and sharing with them the benefit of what he was learning from other projects. Through Helburn, the unit authors became aware of the norms of the curriculum reform movement. He preached "the courage to exclude" as a virtue to be cultivated by makers of new materials, and he kept before the authors the "discovery" principle as a methodological ideal (Pattison in Patton 1970, pp. 65-66).

A Content-centered Unit. The urban unit is an example of the direction the Project was moving, while the water resources unit provides an example of a direction that was rejected. The water resources unit was a fitting contrast to the urban unit in that it took the view that the mind was an empty vessel to be filled with facts. Like the Thomas material it, too, failed to reach publication. If the Steering Committee agreed on little else, it agreed that the units being produced had to present good geographic content and, above all, be teachable. The water unit had good content but, as subsequent events proved, it was not teachable.

Douglas Carter had formerly been with the Earth Science Curriculum Project and was the unanimous choice of the Steering Committee to develop the unit on water. His materials were developed in the spring of 1965, tested during the summer, and revised for wider school trials that fall. Almost from the beginning, the unit ran into problems. Carter developed the materials in close cooperation with Roger Robinson, and tested drafts

of the material in Robinson's ninth-grade class at University High School, Carbondale, Illinois (Carter 1965). Robinson was not a typical social studies teacher: he was an outstanding teacher as well as an excellent geographer in his own right. Though the materials worked well with Robinson teaching them, they were a disaster when tried on a broader basis during the summer and fall of 1965. The results of the summer and fall trials were very similar. Time did not permit a careful review of results, let alone a careful revision of the materials prior to the fall trials. A teacher taking part in the fall trials wrote that the unit was poor in light of its purpose. The vocabulary, according to that critic teacher, was impossible and the sequencing of the unit unreasonable. It was the teacher's considered opinion that "the entire *Fresh Water Resources Unit* should be condemned" (Letter to Helburn from Williams, Jan. 31, 1966).

Part of the blame could be placed on shipping difficulties, getting a late start, and lack of time for revision. Much of the difficulty, however, came from Carter's scholarly approach to the discipline. Helburn characterized the Carter approach as being "straight forward" and largely "didactic," which was, he suggested, "Carter's natural mode" (Memorandum to Steering Committee from Helburn, Nov. 11, 1966). White was also concerned about the organization and strategies of the unit developed by Carter when he wrote

> the level of pedagogic challenge of much of the unit is far below what we might expect from a High School Geography Project product. For example, I would think that the descriptions of both irrigation and of water power and waste disposal leave very little that will pique the imagination of the student and lead him into more basic problems and considerations.
>
> I hope that whatever editing you [Helburn] undertake will provide for some radical removal of the less challenging material in favor of presentation of ideas and methods of thought. In this regard the unit is strong in dealing both with water balance and with benefit-cost ratio calculation (Letter to Helburn from White, Mar. 11, 1966).

An entire year passed from the completion of the limited trials until Helburn reported, on November 11, 1966, that there was still no completed manuscript on water. It was decided to turn the unit over

to Melvin Marcus to incorporate into the habitat unit he was authoring. By 1968 both the water unit and the habitat unit were incorporated into yet another unit called *Habitat and Resources* by a new author, Robert Durrenberger. The completed unit, sent to the publisher in 1970, reflected the work of the editing staff more than it did the efforts of the authors assigned to develop it. By 1970 the unit had equal emphases on process and factual content.

The Unit Structure. The debate over conceptual content of the course materials continued throughout 1965 and 1966. At the time that the McNee settlement theme outline was accepted by the Steering Committee (at its December 1964 meeting), the Project intended to issue a book of outlines that had been proposed as alternatives to the McNee outline. This never came to pass, and even though White wrote one of the outlines, he stated that

> the existence of theoretical outlines claimed little enthusiasm and only the dregs of staff time. Attention was centered so thoroughly upon producing materials that had intellectual structure, an inquiry approach, and practical utility in the classroom that the elaboration of other themes seemed important only if and when similar energy could be devoted to them (White, June 1, 1970, p.8).

On the other hand, Kohn had a different interpretation of why the outlines were never developed. He felt that certain spatial advocates lacked the willingness rather than the time to pursue the alternative outlines (Kohn interview, June 14, 1970).

The settlement theme outline chosen for the Project reflected what McNee felt was a pluralistic conception of the "geographer's way." McNee focused on the different types of research questions asked by geographers. He listed them as follows:

> 1. Physical geography, or geography as earth science; the arrangement and functioning of "natural" things on the surface of the earth.
>
> 2. Cultural, or ecological, geography; the relationship between man and his environment.
>
> 3. Regional geography, or area studies; what a given place is like as a "totality."
>
> 4. Spatial geography, or location theory; the geometry of the earth's surface; why things are arranged as they are and why there are differences in densities, dispersions,

and patterns.

5. Political geography; how the political system impresses itself on the landscape (McNee in Morrissett 1967, pp. 57-63).

The settlement theme outline went through three revisions in a period of about a year and a half. By 1966 it consisted of ten units, parts of which included all the research areas listed by McNee. Spatial geography, or location theory, had a predominant role in all the units, but it most completely dominated the urban, manufacturing, and agricultural units. Culture was stressed in both the culture and habitat units, while the emphasis in the water unit was physical. The political processes unit was, of course, political. The regional emphasis was lacking throughout the outline except for secondary consideration in the political processes unit, and the yet-to-be-developed unit on Japan (McNee in Morrissett 1967, p.61).

There was a general, though far from unanimous, acceptance of this outline, and the acceptance seemed to grow with time. Advocates of a regional course were possibly placated by the continued promise, still being made in 1967, that once the settlement theme course was finished, a regional course would soon follow. To indicate how serious the thinking was on the proposed regional course, outlines were solicited from five geographers, several of whom were the most outspoken advocates of a regional approach (*Report to the AAG...*, March 1967). If their criticism of the spatial approach was not blunted by hopes for the future, it may have been blunted because they were simply too busy developing regional course outlines.

Although McNee was very much in the spatial tradition, his settlement theme outline was challenged for not being spatial enough. Because the course was already heavily urban in orientation, why not allow urban examples to answer all of the questions posed in the McNee outline? (Letter to Helburn from Getis, May 2, 1966) The question was answered at a very lively Unit Author's Co-ordinating Conference in April 1966. The question arose when unit authors were asked if the settlement theme outline was at all restrictive. Most authors felt it was not restrictive enough, though Elmer Keen claimed to see no freedom in writing the Japan

unit. McNee clarified the outline as a thread of continuity rather than a backbone or a straitjacket. The concepts of scale, time, areal association, and spatial interaction were the links that provided this continuity.

Getis suggested that the course focus on urbanization, his reason being that it provided structure and guidance and would be better accepted by the educational community. The discussants went so far as to advocate that a "subcommittee of diverse views" be drawn up to formulate a statement on the possible re-organization of the course. When asked to be on the committee, McNee refused, saying that authors should study the present outline and it would be up to the Steering Committee and the Project office to decide if the units fit the theme. He also suggested that it was inappropriate for the authors to dictate to the Committee. Merrill Ridd recalled his experience with the Earth Science Curriculum Project, in which an outline was handed down from above and the writers labored under it. This experience caused the Earth Science Curriculum Project to move toward more author freedom. The High School Geography Project needed to strike a balance between central control and author freedom. The Project recognized this position and the settlement theme outline remained as the organizing element of the course (Minutes, April 22-23, 1966). This marked a period when the Project seemed to be moving toward more centralization.

In retrospect, the entire argument over the settlement theme outline seems gratuitous. When asked about it, McNee said that he designed the outline to coordinate the approaches which had already been decided upon by the Steering Committee. The first two units were to be on urban geography because it was current and water because that was White's primary interest. Explaining its acceptance over the other outlines, he went on to say that the outline was also political in nature because it included elements dear to all Committee factions. The outline was stillborn, because at the time it was developed, a decision had already been reached to allow individual authors to stay in their home areas and develop their individual units. Having a course structure, as represented by the outline, and having author autonomy were mutually exclusive goals. McNee admitted that he did not realize this at the time the decision was made, but when he did realize it after the Author's Co-ordinating Conference,

he had to make a decision. He could have pushed for a completely unified course--at the cost of a great deal of time and effort--or he could simply let the fact of decentralization work itself out. In looking back, McNee felt his decision was a good one (McNee interview, June 15, 1970). The idea of a settlement theme stayed with the Project and generated vigorous debate, but the outline was more important as an artifact of the curriculum construction process than it was as a structure of the final course materials.

In retrospect Pattison, like McNee, provided an insightful interpretation of the entire debate over course structure. To Pattison the intense interest of the Steering Committee reflected what he called "a phase of Steering Committee control." This period began in the winter of 1964 and lasted into the fall of 1966. It was a time when the Steering Committee tried its hand at curriculum materials development. This accounts for the many course outlines and the intense interest and frequent criticism of the direction the unit authors were taking. By 1967, materials development became increasingly the domain of the Project staff, and the staff's degree of control can be materially measured by the increasing numbers of evaluators, editors, and educators who were added to the staff. According to Pattison it is this staff control phase beginning in 1967 that accounts for the uniform teachability of the curriculum product that finally emerged in 1970 (Pattison interview, July 15, 1970).

Learning Theory and Strategies

Learning theory and strategies were never formally considered in the early development of the Project's materials. The learning theory and strategies of the materials resulted from an evolutionary process rather than an initial view of how learning takes place. The rationale and objectives of the urban unit gradually changed to reflect process and the development of "investigating man." After the first limited school trials, the student and his interests were a primary concern, and the subsequent ordering and structuring of geography content recognized this concern. How the Project explained the type and amount of student learning made evident by the school trials was never explicitly stated,

although there was often the feeling that a learning theory should somehow be recorded. This concern for an infusion of the latest and best thinking in educational psychology led White to contact personally Jerome Bruner and request the names of learning theorists who could be hired by each of the unit authors on a consulting basis for the six to nine months it took to develop their units (Letter to Bruner from White, Mar. 16, 1966).

Several of the later unit authors were able to take advantage of psychological consultants, but it was done more out of a local need with local consultants than a general mandate from the Project office. Howard Stafford, author of the manufacturing unit, worked very closely with the psychologist Leonard Lansky at the University of Cincinnati. Roger Kasperson, author of the political unit, worked with the staff of Clark University and particularly with Joseph Bentley, who at the time was head of the psychology department at Clark. The urban unit was a testimony to the importance Getis placed on educator-author collaboration, but his collaboration was with teachers rather than psychologists and was more typical of the Project approach to learning theory.

Geographer-Educator Cooperation. For the most part, educationists were excluded from the Project's initial curriculum development process. Of the six experts consulted before developing the original Getis unit, not one came from the field of education (Progress Report to HSGP, Nov. 20, 1964). This same lack of involvement of education had drastic consequences for the water resources unit developed by Carter. Once Getis started on his new direction, however, there was a direct influence of less formalized, but no less important, educational thought in the persons of Judith Getis and of Dana Kurfman of the Educational Testing Service. Both were experienced public school teachers and Arthur Getis attributed much of the unit's success to them (Getis interview, June 14, 1970).

A comparison of the evaluation results of both the urban unit and the water unit undoubtedly influenced the direction taken by the more perceptive authors charged with the development of later units. Getis, and by contrast Carter, proved that imaginative learning activities and teaching strategies were vital to the success of high school curriculum materials. Max Kirkeberg and Richard Hough followed this pattern and

developed a very successful unit in cultural geography, attributing much of its success to the imaginative use of teaching strategies. Duane Knos of the University of Kansas marshalled the efforts of his geography department into a highly imaginative unit on agriculture best characterized by the very successful "Game of Farming." Roger Kasperson recognized a need for educational advice when he turned to the staff of Clark and again when he contacted the Abt Associates for the game of "Section" in his political unit. A similar list of units which had difficulty could be drawn up, and it would include the work of geographers who tried to go the development processes alone or who for one reason or another were unable to assimilate the reality of the public school classroom into their writing. The list would include such units as *Networks of Cities, The Habitat,* and *Japan.* Very little of what was contained in these original units survived to be included in Macmillan's *Geography in an Urban Age* course.

The Growing Importance of Teacher Training. A very important factor in determining how the materials would be taught was the teacher's manual. Again, Getis was the first author to use a rather detailed teacher's guide. Because of its success, the pattern was followed in subsequent project units. This was in contrast to Carter's approach in his water resources unit. Carter saw the author's role as one of gathering significant ideas, arranging them logically, and leaving their implementation to the imagination of the teacher. He hoped that, by letting the teachers go, he could then learn what strategies best suited his materials (Kurfman interview, June 2, 1970). This was similar to the reasoning behind the *Advisory Paper* developed in the first year of the Project's history. The view was no more successful in 1965 than it was in 1963. The trials teachers who used the teacher's guide for the urban unit were favorable toward its content and intent. The only negative comments about the guide came from teachers who felt that the guide did not go far enough in suggesting either supplementary materials or detailed guidelines for continuous evaluation (*Educational Testing Service Evaluation Report...,* March 5, 1966, pp. 27-28). The trials were as much a test of the teacher's guide as they were of the student materials.

A learning theory is only as good as the student and teacher behaviors

that result from it. The teaching strategies implicit in the High School Geography Project course materials and stated in the teacher's guide made teaching and learning fun. The students at Bowdish Junior High School were interacting with the materials and each other, and their behavior was being modified by the process. The students had somehow been freed by the classroom climate to learn for themselves. The teacher in the Bowdish classroom had also been taught something about learning and its application. If the materials were to be taught successfully at all, a definite behavior change was required on the part of the teachers. They could no longer view themselves as the fountainheads of knowledge, as the great arbitrators and decision makers, or as the managers of a "quiet" learning environment. The High School Geography Project teacher education film, "High School Geography: New Insight," has little narration, but its message is clear. Active, learning students tell the High School Geography Project story as well as it can be told.

Teacher education was a part of the Project's role ever since the first teacher's guide was printed. Its teacher training program began in earnest the moment the first teachers were recruited to teach the materials on an experimental basis in 1965.

The first teacher training materials were developed when the Project staff realized that a "new geography" was only as new as the classroom teacher was willing to make it. As time passed, the importance of teacher education grew to the extent that it dominated the efforts of the Project's last year of existence. It is not surprising that the Teacher Education Kits prepared by the Project used the Project activities as a vehicle to transmit the concepts and methodology of good teaching.

Development of a Process Model

The early years of the High School Geography Project were productive but not very efficient. Existing curriculum theory provided little insight into the type of revision the Project leadership felt was needed for high school geography. When the Steering Committee did agree on an approach it was usually so eclectic in nature that it failed to provide adequate direction for the unit authors. Much responsibility devolved on the authors and consensus came after rather than before the materials were

developed. The first three steps of the curriculum development model (see page 19) amassed data which pointed to new knowledge and new applications of existing knowledge in the area of curriculum development and design. The intensive evaluation efforts of the later steps in the model moved the Project staff into a central role in tightening and refining the new curriculum design.

Chapter 3

The Curriculum Evaluation Model

From the beginning of the High School Geography Project, evaluation was taken seriously and was an integral part of the Project's curriculum development process. The type of evaluation used by the Project had little precedence and, as a result, much of the work constituted a new approach to the subject. The emphasis the Project placed on evaluation was a direct outgrowth of the emphasis placed on the teacher and the student. The task was not to evaluate students and teachers as individuals, but to evaluate the teaching materials through the knowledge, skill, feelings, and attitudes of their users. This was a very different concept of evaluation from that which was current in educational thought.

Evaluation has always been a part of the educational process. Before the growth of the measurement movement in pre-Darwinian times, evaluation was a function of the intuitive processes of the evaluator. With the development of modern psychology, measurement moved from its intuitive base to a point today where it can rest on solid statistical data. This movement marks a shift in technique and methodology, but not a shift in emphasis. The bulk of evaluation theory at the time the Project began was still centered on the individual, be that individual a student, a teacher, or an administrator. When curriculum materials were the subject of evaluation, usually the study was designed to tell how well the materials performed but not why that was the case or how to change them to give better results.

There is a growing body of evaluation literature emphasizing the gathering of information to improve curricula. Bruner supported the idea of developmental evaluation when he wrote,

> It would seem much more sensible to put evaluation into the picture before and during curriculum construction, as a form of intelligence operation to help the curriculum maker in his choice of materials, in his approach, and in his manner of setting tasks for the learner. . . .if evaluation is to be of help it must be carried out to provide feedback at a time and in a form that can be useful in the design of materials and exercises (Bruner 1967, p.30).

Lee Cronbach has also suggested that curriculum evaluation should serve the function of identifying the facets of a course which need revision. A large on-going pool of questions should be established to test and modify the objectives, content, and learning situations of new curriculum materials (Cronbach 1964, pp. 232-36). Michael Scriven has provided a term for this new type of evaluation. He distinguishes it as "formative" evaluation, in contrast to "summative," which is primarily designed to evaluate the completed product (Scriven 1966, pp. 7-8).

The Evaluation Model

The question of evaluation was considered at the Steering Committee meeting held in December 1964. It was the same meeting that launched both the urban and water units and the settlement theme outline. Tom Hastings, who was then director of the Curriculum Evaluation Research Center at the University of Illinois, was present at the meeting. He pointed out a dual objective that should be included in any of the Project's evaluation: to help revise the materials and to help schools to decide whether to adopt the materials. He strongly suggested that the Project ally itself with a professional testing center (Minutes of Steering Committee Meeting, Dec. 29-30, 1964). Helburn shared this belief, which was consistent with what was already being done by other curriculum development projects, particularly the Biological Sciences Curriculum Study and the Earth Science Curriculum Project. He recommended that the Project find an agency that could help with evaluation of the Project's materials (Memorandum to Steering Committee from Helburn, Dec. 11, 1964).

There was some initial doubt about what testing agency to use, but it was settled after Helburn visited the Psychological Corporation of New York and the Educational Testing Service of Princeton. Both could have prepared an objective test for the Project, but the Educational Testing Service (ETS) representatives indicated an interest in, and the capabilities for, a variety of different kinds of evaluation (Letter to White from Helburn, Feb. 10, 1965). Because of this, ETS became the consulting agency for the Project's evaluation.

Each unit of the settlement theme course went through one or more

cycles of development, evaluation, and revision. For the urban unit, this cycle was repeated five times during the materials development. The initial development stage relied heavily on the evaluation specialist. His job was to work closely with the unit author to develop a pool of questions sufficient for the tests and evaluation questionnaires used thoughout the informal teaching trials. It was thought that the careful construction of test items would force the author to clarify his objectives and focus attention on the most important concepts of the unit; but, as it actually happened, the best test items could not be constructed until after the course materials were written (Richburg interview, June 8, 1970). Once the objectives were formulated and the methods of teaching them selected, educators were called in to look at the teachability of the materials. If any modification in objectives took place, the evaluation specialist was often called in to develop new test items to evaluate the modified materials (Memorandum to staff from Helburn, April 5, 1966).

Informal School Trials. The evaluation phase of the cycle began when the first version of the materials was ready for tryout. Informal school trials usually involved five teachers and some 300 students. The trials took place in the author's home area so the author could have more opportunities to observe the teaching of his unit. An attempt was made to choose classrooms with a representative cross section of students and teachers. However, because the informal trials were voluntary and carried out in close proximity to the author's university, the students and teachers used in the trials were somewhat above the average (Kurfman, Feb. 1967, p.39). This bias was assessed by an aptitude test given to each of the students. In addition to this, the unit test was administered before and after the unit was taught to see how well the students learned the concepts and skills of the unit. To assess attitudes toward the materials, students and teachers were given questionnaires designed to measure their perceptions of the clarity and interest of the materials.

The revision cycle began very soon after the informal trials got under way. Authors met with the trial teachers while the materials were being taught, as meetings of this nature provided a valuable two-way flow of information. Teachers could identify problems in the teaching of the

unit, and the author, often in conjunction with the other teachers, could offer suggestions that many times became inputs for the revision process.

The formal revision came at the conclusion of teaching the unit after all the test data had been collected. Teacher comments, student tests, and teacher and student questionnaires provided data used by the evaluator to make recommendations concerning modifications needed in the unit. These recommendations, coupled with the author's own ideas, became the basis for unit revision by the author. The revised materials were then sent to the Project headquarters to be prepared for more extensive trials.

Limited and National School Trials. The entire cycle was repeated in the limited field trial. This time, however, the trials were generally conducted by the Project staff rather than the unit authors. If considerable revision had occurred after the first limited trial, the unit might be tried again in a second, third, or even fourth limited trial. The data collection process of these more expanded, limited school trials was much more systematic than the first, informal round of trials. Often, from three to six units were tested with some 25 to 75 teachers. Because of the numbers of teachers and students involved, many more variables could be brought into the evaluation picture. Students were divided by achievement, sex, and social background. Teachers were divided by academic background, geographic knowledge, and, in at least one trial period, by the type of training provided by the Project itself. Comparisons could then be made and correlations drawn from these multiple variables with success or the lack of success of the materials. For example, in the 1965-1966 limited school trials, 25 of the 70 teachers involved were selected as an experimental group and given an intensive short course in the geographic concepts and teaching strategies of the new materials. It was found that there was no significant difference in the performance of these experimental teachers when compared with the control group who were given no previous training by the Project (Richburg interview, June 8, 1970).

While there was a need and a desire on the part of the Project developers to have widespread national school trials on the completed course, time and resources prevented these trials from taking place. The need was there, but responsibility for wide-scale evaluation was turned over to the

publisher. At this time there is no indication the publisher has assumed this responsibility. Even if the evaluation had been carried out it would, in all liklihood, not have followed the High School Geography Project model. The unique nature of the Project's evaluation was its emphasis on a rapid transmission of results to parties responsible for making curriculum revisions. Because of this, extended data processing procedures such as analysis of video tapes or the systematic evaluation of classroom behavior were precluded by the model. The model also precluded delayed feedback of teacher and student impressions or student attainments months or years later (Kurfman 1968, pp. 7-9).

Evaluation in Unit Revision. The unit tests (focusing on cognitive questions) varied considerably from year to year and from unit to unit. The format of the questionnaires (focusing on student and teacher judgments about the materials), however, remained fairly consistent over time. (See the Appendix for examples of the questionnaires.) As a result of this stability, reactions to the units could be compared from year to year either with each other or within various versions of the same unit. The questionnaire data had stability which, in turn, provided criteria for judgment.

The data on cognitive growth were much more of a problem. What constitutes a significant growth in cognitive ability from pre- to posttest? Was the amount of change constant with each concept tested? What about an activity that combines many concepts and skills? All of these questions had to be answered, but the early answers often came in terms of intuitive feelings and grew out of experience rather than statistical confidence intervals. As time went on and criteria became better established, it was much easier to make these substantive judgments.

An Application of the Evaluation Model

The model of evaluation described so far is general in nature. In order to understand how it worked and how it influenced the Project materials, it is necessary to trace the evolution of a unit through each of the model's cycles.

1965 Informal School Trials. The urban unit, after a hesitant start, was written over a brief six-week period of time. The initial trial

phase began in April 1965 in two high schools and a month later in three more in the author's locale. During the initial informal trials, many short meetings were held between Dana Kurfman of ETS and the unit development team. (The many meetings between the Educational Testing Service and the unit author were probably unusual, due more to the close proximity of Princeton, New Jersey, to New Brunswick and the close person friendship of Kurfman and the Getises.) The meetings provided a useful sounding board for the ideas that had gone into the materials. The experiences of the trials were satisfying, and both the teachers and the students were enthusiastic about the unit. The summer of 1965 was spent revising the unit in light of the informal trials experience, and a revised version of the unit was ready for the limited school trials that fall (*Report on the Urban Unit...*, June 9, 1965).

1965-1966 Limited School Trials. Getis felt pressured during the summer when he was revising his unit for its first limited trials. There were two or three activities which he wanted to include in the revised unit, but time simply did not permit him to do it (Letter to Helburn from Getis, Aug. 19, 1965). Also time prevented the revised materials from being carefully reviewed by the Project office. Revision could have prevented another stormy Steering Committee meeting where the Getis unit was roundly criticized: it emphasized the wrong concepts; it did not respond to the needs of the student; and it did not meet the obligations of the profession. Getis was commended, however, on the imaginative teaching strategies used in the materials (Minutes of Steering Committee Meeting, Dec. 10-11, 1965). This confrontation came before the results of the unit's trials were in Steering Committee hands. If the materials were criticized by the geography profession at the Steering Committee meeting, they were apparently vindicated by the results of the 1965 limited school trials.

The limited trials were actually regional trials, for both the urban unit and the fresh water resources unit were tried in California, Illinois, Ohio, and New Jersey. Each of the four areas was organized under the leadership of an area coordinator who served as a supervisor and liaison person between the teachers, ETS, and the Project office. Getis stayed with his unit during the first limited trials as the New Jersey area coordinator. In all, there were 47 teachers and 2,200 students involved in

the trials (*Educational Testing Service Evaluation Report...*, Mar. 5, 1966, p.2). In a summary of its recommendations drawn from the trials, ETS reported that:

> 1. The test results and the enthusiastic reponse of both teachers and students suggest that the unit is a successful teaching instrument in approximately its present form.
>
> 2. To the extent that the generation of student interest in geography is a goal, group activities involving the manipulation of objects should be retained.
>
> 3. A greater variety of readings should be provided in the unit, especially readings suitable for poor readers.
>
> 4. The success of the several activities centering on the local community suggests that, whenever possible, attention should be centered on the students' own communities.
>
> 5. The unit is too long. Certain activities will need to be dropped, put on an optional basis, or combined.
>
> 6. Teachers indicated that class discussions, especially those based on the unit readings, were relatively ineffective in helping students learn what was intended.
>
> 7. The value of retaining the student exercises requiring extended computations should be seriously considered.
>
> 8. Some questions on the unit bear little direct relevance to the unit concepts. Therefore, the unit test should be analyzed and revised to provide a more precise measurement of all the unit concepts (*Educational Testing Service Evaluation Report...*, Mar. 5, 1966, pp.27-28).

The final published course reflects the impact of several of these recommendations. In the short run, however, the evaluation report failed to pinpoint the real problems which existed in the unit. Teachers and students encountering such a novel set of materials were enamoured with them and were sometimes unwilling to find fault with the material. Because teachers reported that only minor revisions were needed, only minor revisions were recommended in the evaluation report (Richburg 1969). The revised unit went into its next limited school trials little changed from its 1965 format.

Lack of revision can also be explained by other factors. Severe time limitations were always a factor influencing the testing-revision cycle. The philosophy behind the presentation of evaluation data was another problem in the revision process. The prevailing attitude of the early evaluators at ETS was that the evaluation results should more or

less speak for themselves. This attitude was reversed later when the Project staff evaluators began making much more specific recommendations regarding the revision of the materials (Kurfman interview, June 2, 1970).

1966-1967 Limited School Trials. In the fall of 1966, *Inside the City* (as the Getis unit was now called) was one of five units tested by 70 teachers and some 3,000 students. The evaluation for this second trial was similar in format to that of the earlier trials. However, it used more criteria in rating the performance of each activity in the unit. This reflected not only the information gained from the earlier trials, but the increased experience and confidence of the Project staff.

The succeeding 1967 version of the urban unit clearly showed the impact of the past year's evaluation efforts. Ten activities representing 60 percent of the 1966 unit were dropped. In the activities that were retained, some 75 percent of the minor recommendations made from the trials were implemented. The dropping and recombination of activities reflected a new concept of "activity" that had evolved. An "activity" had previously been thought of as a short 20- to 30-minute lesson developing a single, specific student behavior. Now the concept of an "activity" was broadened to include a bundle of interrelated outcomes associated with a longer period of student involvement with the materials. This made the task of evaluation much easier. Each activity, as a coherent entity in itself, could be more readily identified and its effects isolated for scrutiny (Kurfman interview, June 2, 1970).

1967-1968 Limited School Trials. Twenty-seven teachers and 1,250 students were involved in the 1967-1968 limited school trials. Besides the radically revised urban unit, three other units were tested. By this time, both the evaluation and the revision cycle were carried out exclusively by the Project staff. The evaluators used nearly the same criteria for judging the unit's performance that were used in the preceding year.

A new direction of the 1967-1968 trials was the relatively small number of teachers involved. The previous school trials convinced the Project staff that a small number of highly articulate teachers could provide maximum help in pointing out curriculum weaknesses and suggesting improvement (Richburg 1969, p.4). Most of the teachers used in the

1967-1968 trials had taken part in the Project's previous trials. These "right kinds" of teachers were split evenly to represent geography teachers with a great deal of experience in the discipline and social studies teachers with a minimal geography background.

One variable examined was the usefulness of clustering teachers in the same locality. The trials demonstrated that having a cluster of teachers in one area did not generate the close cooperation that was expected. There was evidence, for example, that clustering trial teachers produced little mutual support. Increased communication between teacher and Project staff was seen to be more helpful in curriculum revision than communication among trials teachers (Memorandum to Steering Committee from Kurfman, Feb. 20, 1967).

1968-1969 Limited School Trials. The revisions following the 1967-1968 trials were done in close cooperation with the Macmillan Company, the publisher chosen for the course. Patricia Cush worked with the Boulder staff during the summer and fall of 1968, during which time the major editing of the first three units was completed. All three units were printed in nearly final format for the last school trials to be carried out in the 1968-1969 school year. The *Geography of Cities, Manufacturing and Agriculture,* and *Cultural Geography* units were tested in 29 schools in 22 states (*Report to the AAG...,* July 1969). The units were evaluated in terms of teachability and of student attainment of objectives. On the basis of these evaluative findings and on the advice of the Steering Committee and editorial staff, the units were revised and the final versions were transferred to the Macmillan Company for commercial production.

Analysis of the Evaluation Model

The Getis unit went through five cycles of development, evaluation, and revision. This was more evaluation and revision than any other single unit of the course. Robert Richburg, a Project staff evaluator, followed each phase of this process over a five-year period and made the following general statements concerning the process:

> 1. There are many legitimate reasons for the recommendations of the Evaluation Reports not being implemented in the unit revisions. Insufficient editing time, over-riding concerns about the

length of the unit, or of the general content that it includes would be but a couple of such reasons. It does seem apparent, however, that particularly in the early revisions of the *Urban Unit* the evaluation reports were not utilized as fully as they should have been.

2. The evaluation reports have had much less influence in determining which activities are retained and which dropped from the unit, than they have had in determining specific revisions for the activities which have been retained.

3. The composition and style of the evaluation reports themselves must bear much of the responsibility for the relatively small influence they have had in the revision process. The reports have tended to be unnecessarily long. The recommendations have often lacked clarity and specificity. With the exception of the most recent evaluation report (1968) recommendations have not been made authoritatively or with conviction.

4. The evaluation reports have tended to provide more help in suggesting minor revisions for activities which have been well received by teachers and students, than for activities that have been poorly received and, therefore, need greater revision. For example, the 1968 *Growth of Cities* evaluation report offered nine revision recommendations for the "Portsville" activity which was by far the best received activity in the unit, and only two recommendations for the "Bruges" activity which was the least successful activity in the unit.

5. The editor-developers within the Project office have a better record over the past four years in revising the materials developed by the unit authors than they have in writing new activities. The three activities that were developed within the Project office for the 1967-1968 edition of the unit, "A Few American Cities", "Bruges", and "Models of City Form" have not been as well received by both teachers and students as the activities that were originally developed for the unit and later dropped.

6. The size of our school trial populations has not influenced the number or value of the recommendations that the evaluation reports have made. In fact, the 1968 evaluation report describing the smallest of three school trials over the *Urban Unit*, has turned out to have the greatest impact on the revisions of the unit.

7. The evaluation recommendations for the *Urban Unit* have been implemented more consistently in the past two years than in 1965. Seventy-five per cent of the specific revision recommendations in the 1967 report were implemented as were 60 per cent of the recommendations in the 1968 report. Only about 25 per cent of the recommendations made in the 1966 report were implemented.

8. The 1968 evaluation report has attempted to make recommendations for larger scale or more involved revisions, to a greater degree than its predecessors. The March, 1966 report offered virtually no recommendations beyond the minor sort involving simplifying vocabularly or adding questions to the readings. The

> December, 1966 report included some recommendations of a more involved kind, but they were few by comparison with the number made in 1968 (Richburg 1969, pp. 6-7).

It is an interesting observation that in the early trials, when evaluation data were badly needed, the Project staff did not have the experience to make the fullest use of it. In the 1968-1969 trials, when the data collection was working at its best, the Project staff relied on evaluation results only secondarily in the revision process. Many times the editing staff could tell what activities needed revision even before the evaluation results were returned. Often times the evaluation results served as little more than a double check on changes that were already made or planned.

In the 1968-1969 funding period, Congress cut back on its allocation of funds for education, and a 70 percent ceiling was put on the High School Geography Project budget. This caused a considerable reduction in personnel and a drastic curtailment of the Project's evaluation program. There was to be a national school trial to test the entire course, and this was to be conducted by an outside agency. This trial was abandoned. A critical result was that three units of the course that had been almost completely revised after their first field trials went to Macmillan with no further evaluation at all. The Project staff was confident, however, that the quality of these untested revisions was comparable to the other more thoroughly tested course units (Richburg interview, June 25, 1970). This indicated a decline in evaluation and a growing reliance on other forces within the curriculum development process.

Other Forces in the Revision Process

There is little doubt that formal evaluation played a major role in shaping the course that was eventually turned over to the Macmillan Company. This, however, was only one of many influences shaping the materials. White captured the scope of these other influences when he wrote,

> Altogether in the project, a remarkable group of more than three hundred classroom teachers, twenty psychologists and three hundred geographers from one hundred colleges and universities took a direct and responsible part in devising, testing and revising course materials (White, June 1, 1970, p.6).

The Project Steering Committee was a powerful force in shaping the course material. Arthur Getis was not the only author to go before the committee and plead a case for his version of geographic education. Authors were given freedom on the assumption that they were competent in their specialties and knew what to teach from their fields. This freedom was elusive, however, because each author was accountible to the Committee's high standards, to the changing curriculum values of the Committee's membership, and to their settlement theme outline. In 1965, after the Steering Committee's rather severe criticism of the water unit, it was suggested that Committee criticism would be more helpful if it came before a unit was completed. It was suggested that the members comment by mail on the second or third draft of any future units (Minutes of Steering Committee Meeting, Oct. 1-2, 1965). The water unit "disaster" called for a more formalized system of feedback sometime "between the prospectus and the rigid form." It was decided that the staff would prepare a report on the progress of each unit author, including notes on what the author was including and leaving out of the unit. These reports would be sent to the Committee members, who would make comments of their own and return the reports to the Project office. It was also decided that a consulting relationship would be established between the Committee and the unit authors (Minutes of Steering Committee Meeting, Mar. 11-12, 1966).

The Steering Committee met approximately four times a year, establishing over time a routine agenda that formalized its operations. The agenda covered most policy-making areas and very few important decisions were made without Committee approval. The Steering Committee took its duties seriously and left its imprint on almost all aspects of the Project materials.

Individual Steering Committee members often kept up a personal correspondence with the director through the entire Project's history. The volume of this correspondence is some indication of each member's importance to the Project. White's correspondence was the most numerous, and it dealt with many of the key decisions made throughout the Project's history. He was the Steering Committee between meetings, and this invariably led to his receiving a carbon copy of most of the important Project correspondence. White's correspondence was testimony to the fact

that he was responsible for maintaining the Project's forward motion and its overall direction (Patton 1970, p.60).

The Project directors, themselves, left their mark on the materials. Having worked with each of the directors very closely, White assessed their unique contributions when he stated:

> William Pattison contributed mightily to the conceptual organization of ideas in the early stages. Nicholas Helburn emphasized the basic importance of teachability, intellectual curiosity and stimulation in classroom procedures. Dana Kurfman gave a searching interest in the process of classroom evaluation and in means of transmitting new ideas to teachers and teachers of teachers (White, June 1, 1970, p.5).

The other major influence on revisions came from the editing staff itself. The editing phase of the Project began when Helburn reported to the Steering Committee in March 1966 that the Project was entering a "new phase." After the March Steering Committee meeting, all the authors had been assigned their respective units. In the Project's new phase, the focus of staff attention was to secure "the finest kind of product from these efforts." Recruitment for an editing staff began a short time later (Memorandum to Steering Committee from Helburn, Mar. 18, 1966).

Editing was based on information gathered in school trials, on detailed criticisms made by Steering Committee members, on advice from outside geographers and educators, and on the results of an editing conference with four of the unit authors (*Report to the AAG...*, Mar. 10, 1967). The criteria given by the Project office for editing the course centered on significance of geographic content, teachability, and sense of fit within the total course outline. White, representing the Steering Committee view, added two additional factors by stressing that "the concepts should be valid" and "that nothing be incorrect or misleading" (Minutes of Steering Committee Meeting, June 30-July 1, 1967). The major task of the editors was to transform the work of the original authors, written in various styles and formats, into a unified course of instruction. This often meant clarifying and refining the teacher guidelines, sharpening or rewriting activity objectives, and providing better readings and data for the students. At times, it even meant writing completely new activities when the need for them was apparent. Finally, it meant working with Macmillan to standardize the format and typographical

style and develop the artwork and cover designs. The task of coordinating this enormous job was given to Donald Patton when he became the Project's managing editor in 1967. He and Elizabeth Johnson, the senior editor, headed a nine-member editing team. Between 1967 and 1969 and under critical time constraints, this team welded a massive array of curriculum output into a six-unit course of instruction.

Comparative Evaluation Models

High School Geography Project evaluation program can be better understood and appreciated in comparison with the evaluation done by other projects. Because of the great amount of money spent by the Project, it is only fair that large curriculum development efforts, comparable in size and expenditure, be used for comparative purposes.

Biological Sciences Curriculum Study. The Biological Sciences Curriculum Study (BSCS) used a completely different development model which, in turn, called for a considerably different evaluation model from that used by the High School Geography Project. Three texts and accompanying teacher and student materials were developed at a writing conference in the summer of 1960. These materials represented the input of biologists and public school teachers, although the subject-matter specialists did the major share of the writing. Testing centers were then selected in 15 different regions, with five testing centers for each of the three versions of the materials. Each testing center had a cluster of about seven teachers, one of whom had taken part in the 1960 writing conference. These centers each had a college consultant who was also a member of the 1960 writing conference. In late August, 105 of the trials teachers gathered in Boulder for an intensive, week-long workshop where they became familiar with the materials. The data gathering process consisted of keeping open-ended daily logs which were collected weekly and sent to the testing center. These logs were buttressed by reports from visiting consultants. The logs and reports were compiled and presented to the chapter authors during the 1961 summer writing conference. Student opinion was gathered by having selected classes write about their experiences with the materials to the Project office. In addition to the above-mentioned testing centers, some 13 other independent centers also supplied information, although in a

much less formal manner.

Many of the same teachers who participated in the trials of 1960-1961 stayed with the Program during the similar trials with the new version of the materials during the 1961-1962 school year. To the original 360 schools another 150 were added for the second set of trials, bringing the total to around 500 schools representing 52,000 students in 35 states. The major concern at this stage was as much with publicity as with evaluation. Thus more schools used the materials than were necessary to generate adequate evaluative data. This was particularly evident in the 1962-1963 school year when 500 more schools joined in the trials (Grobman 1969, pp. 103-117).

The evaluation undertaken by BSCS was centralized, but it is doubtful that the use of the accumulated data could have been in any way systematic. The open-ended nature of the evaluation instruments and the proliferating numbers of teachers and students filling them out almost precluded a systematic analysis of more than a small sample of the collected data.

School Mathematics Study Group. The School Mathematics Study Group (SMSG) used a writing conference to develop and a testing center model to evaluate their seventh- and eighth-grade materials. An SMSG center was defined as a city or locality with a chairman who obtained suitable teachers, distributed materials, and returned evaluation data. Some centralizing focus came from a college consultant assigned to each center who provided background information and helped the teachers with problems growing out of the trials. Each center tried out as many units as possible, although, to cover all units, some specific ones were assigned to certain centers. In addition, the 75 teachers were invited to a conference in Washington, D.C., in the fall of 1958 to become familiar with the material they were to teach and the philosophy behind it (Wooton 1965, pp. 46-50).

The results of the trials were the topic of a two-day conference directly preceding a 1959 summer writing conference. The panel found the teachers' comments favorable, and most of them were inclined to recommend the inclusion of all the units tested in a complete course. There were specific comments made about each unit concerning such things as

difficulty, style, teachability, and supplementary materials. From the general nature of these recommendations, it is not surprising, as Wooton noted, that a topic considered "most teachable" by some was thought "most dull" by others (Wooton 1965, p.63).

A similar format was followed during the rest of the developmental process on a greatly expanded scale. The evaluation program carried out by SMSG was limited by the nature of the conference approach to curriculum construction. By allowing only two days to survey the evaluation data, the direction provided by the data would be general rather than specific.

The Role of Evaluation in Curriculum Design

The emergence of national curriculum projects made evaluation an integral part of the curriculum development process. Existing evaluation theory failed to provide the type of evaluation that was needed. Standards against which to judge the "success" of activities did not exist and neither did methods of identifying specific changes that might improve the materials. Rather, they evolved (at least in HSGP) through an interactive process among Steering Committee members, unit authors, Project staff, trials teachers, students, and the content and methods embodied in the materials.

The formative evaluation used by the Project worked in some areas and solved some problems, but it was relatively ineffective in other areas with other problems. Evaluation results were most needed during the early phases of development, but the staff was not experienced enough to make the best use of the data. In the later trial periods, the knowledge and experience of the staff were so keen that the best evaluation data then existing added little to the curriculum development process. A similar growth in experience took place throughout the trials when it was discovered that small but highly articulate groups of teachers, working independently of each other, provided the best revision information. This was in direct contrast to the evaluation models of other projects, which were based more on the quantity of evaluation data rather than its quality.

The most important inference to be drawn from the Project's

evaluation model is the provision it allows for continuous adaptation on the part of the curriculum designer. This is a departure from the narrower "summative" definition of evaluation, which is concerned with the final educational outcomes at the termination of the instructional process. If students fail to achieve the objectives of the teachers' programs, the fault does not always rest with the students. Formative evaluation will indicate whether the various components of the instructional program should share the blame. Also it will indicate whether the blame should rest with the curriculum authors or the teachers of the program. In whatever degree the blame is assigned, its allocation will be constructive only to the extent that it provides guidelines for improving present and future instruction.

Chapter 4

Accomplishment of Project Objectives

The High School Geography Project officially finished at the end of August 1970. Its nine-year history was marked by great success in many respects and by failure in others. Just how successful was the Project? We shall look at the early objectives of the Project and see whether these were accomplished.

Unmet Objectives

In the early years of the Project, the *Advisory Paper* was given to ten public school teachers who were charged with developing a ten-unit course based on the conceptual framework in the paper. They failed to accomplish this objective.

Another early objective was to produce a television course taught, in all likelihood, by Kohn. This objective was never achieved.

Knowledge of other people and other lands was another early objective of the Project; yet the materials were centered in large part on the United States. It is doubtful that students using the Project's materials could pass Preston James' "thumb test"--giving a spontaneous ten-minute description of any area on which the thumb landed on a spinning globe (White, Feb. 1967, p.4).

There was talk in the early days of the Project about creating "teacher-proof" materials (Getis interview, June 14, 1970). Far from being teacher proof, the course materials liberated teachers from traditional methodology and proved to be powerful tools in changing teacher behavior.

The course, at one time, was envisioned as a unified whole with one unit providing the conceptual structure that would be elaborated in the next, thus creating a highly integrated set of "building-block" course materials. In their final format, the units could be used independently, as easily in an economics or political science class as in one devoted entirely to geography.

It is possible to go on at length listing objectives that were not

met, but the definition of failure must inevitably be faced. Like success, failure depends on standards established by the viewer. For the objectives that were not accomplished, there were counter-balancing objectives that were accomplished. The unitary emphasis of a one-man or ten-teacher course gave way to the pluralism of the final course materials. The need for geographic literacy perceived by the geography profession and represented in the thumb test was balanced against the objectives of knowing the local community and applying spatial concepts in a familiar environment. When the Christaller central place model came into conflict with teachability, its hexagons had to be sacrificed (Helburn, April 1970, p. 12).

The complete reversal or serious compromise of some of the Project's initial goals challenged the time-honored assumption that there is a linear progression from philosophical considerations to the completed materials placed in the student's hands. Examples of this were numerous throughout the Project's history. Many of the later goals of the Project came about in response to the materials' practical success or failure in the classroom. This pragmatic blending of theory and practice was due in part to the sensitivity of the Project's evaluation network and the responsiveness of the Project leadership to that network. Other goal reversals developed out of the conflict and organizational dynamics of the Project's bureaucracy. If the Steering Committee could not agree on certain geographical concepts, they certainly could agree on less ego-involving educational concepts like "inquiry" or the "needs of the learner." Other goals were adopted and rejected on the basis of no other criteria than the lack of time. The mind-set of the staff also had an impact on the type of goals that were pursued. Each Project director and his staff left an imprint on the materials.

From its inception, the curriculum development process of the High School Geography Project was a continous learning experience. If learning had not taken place, then the course objectives would have emerged in the final materials changed very little from their original formulation.

The remainder of this chapter is devoted to isolating some of the dominant objectives of the Project and assessing whether they were met. Two of the objectives (product and discipline) assessed in the following

pages are ones that received continuous attention throughout the Project's history. The third objective considered (teacher education) was minor initially but gained in importance over time.

The Product as a Project Goal

An early and very obvious goal of the Project was to create a complete geography course for high school students. This goal was accomplished when the six units of *Geography in an Urban Age* were turned over to The Macmillan Company for publication. The units of the course are: *Geography of Cities, Manufacturing and Agriculture, Cultural Geography, Political Geography, Habitat and Resources,* and *Japan.*

But merely producing a package of materials does not qualify the Project as a success, even on its own terms. The intent was to produce materials that would help to change geographic education. White described three levels of impact the course might have:

> Ten years from now, if the venture is completely unsuccessful, the high school offerings will be little changed from today. If it is moderately uncessessful, the course will be taught widely and in substantially its present form. If it is highly successful, it will have generated a series of competitive improvements and internal revisions so that the new course will be rapidly replaced by more effective ones. This first course is not intended to be a mold in which geography offerings are formed and frozen. It should be a leaven which should help lighten and lift up the whole loaf of geographic education (White, June 1, 1970, p.8).

In an attempt to assess both the past and the future impact of the High School Geography Project, the Project staff initiated an opinion survey soliciting the views of persons who were closely associated with the Project. Impressions of ex-staff members, ex-Steering Committee members, and unit authors were solicited by personal letters from the director. The 130 trials teachers were contacted through a three-page opinion survey. An attempt was also made to assess a representative sample of people not connected with the Project, but who were considered a part of geographic education (Richburg, June 1970). A representative sample was obtained by taking every tenth name from the membership rolls

of both AAG and NCGE. In all, 1,200 three-page questionnaires with both open-ended and objective items were mailed. There was a 38 percent return from NCGE, a 25 percent return from AAG, and a 45 percent return from former trials teachers, so the conclusions reached were tentative. These findings are shown in Figures 1 and 2 on the next page.

The survey determined that, by and large, the Project was known in the geographic education community. In fact, 93 percent of the AAG and 85 percent of the NCGE samples had heard about the materials. In the case of AAG, 12 percent, and in the case of NCGE, 18 percent of the respondents had actually taught some of the activities or units. When asked to compare the materials with existing materials for teaching geography, 94 percent of both samples indicated a positive feeling, which was divided fairly evenly between "somewhat more effective" and "much more effective." Only one percent of the respondents claimed that the High School Geography Project was less effective than what had been taught before. When asked the same question, 87 percent of the trials teachers said the High School Geography Project was better, and 56 percent of them classified it "much more effective." The profile in Figure 3 (on page 65) summarizes the responses of all three groups to the course as a whole. The configurations indicate that at least the geographic education community considered the course an overwhelming success. The most significant difference between the group responses was related to the question of the course currency. Considering the nature of the traditional text materials, it was not surprising that the trials teachers considered it more current than did either the AAG or the NCGE members. At the .05 confidence level, the trials teachers felt the materials were innovative and reflective of the best traditions of the discipline more than did either the AAG or the NCGE members. The difference between the two professional association's members on the answers was more difficult to explain. Although the NCGE respondents believed the course was more dated and boring to students, the AAG respondents felt it was less useful, less reflective of the best tradition of the discipline, and less innovative. This was in spite of the fact that the AAG was the fiscal agent for the Project. It could reflect the fact that the AAG clientele were mainly practicing college geographers and would, as a result, be closer to the research frontiers of their discipline

Figure 1.

An Assessment of the Impact of HSGP on the AAG and NCGE

What sort of contact have you had with HSGP materials?

	Responses in Percent	
	AAG	NCGE
A. I know nothing about the HSGP materials.	7	13
B. I have only heard about the materials.	39	26
C. I have looked at some of the unit materials.	41	42
D. I have taught some of the unit activities.	12	18

If you have had some contact with the materials how effective would you judge them to be in comparison to existing means of teaching geography?

	Responses in Percent	
	AAG	NCGE
A. HSGP materials are much less effective than existing materials.	1	---
B. HSGP materials are somewhat less effective.	---	1
C. HSGP materials are about as effective	4	5
D. HSGP materials are somewhat more effective	45	48
E. HSGP materials are much more effective	49	46

Figure 2.

An Assessment of the Future Impact of HSGP on AAG and NCGE

If you are or will be teaching, do you intend to use any parts of HSGP materials in your classes?

	Responses in Percent	
	AAG	NCGE
A. Yes	39	48
B. No	18	19
C. Question not appropriate to my situation	42	33

If you are or will be teaching, do you intend to use the ideas incorporated in the HSGP materials in your classes?

	Responses in Percent	
	AAG	NCGE
A. Yes	55	62
B. No	10	4
C. Question not appropriate to my situation	34	33

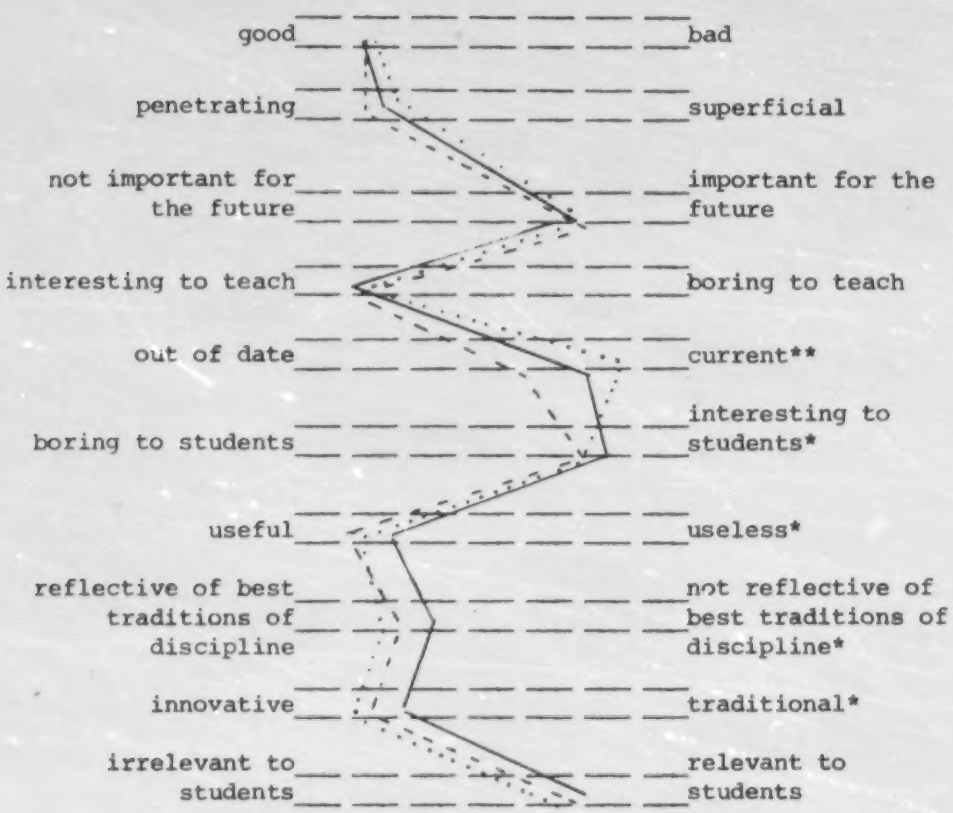
than the NCGE, which is made up of people more typically associated with geographic education.

A measurement of the Project's success as of June 1970 (the time of the final Steering Committee meeting) with public education generally came from the reports of The Macmillan Company on the volume of sales of the course. As of June 1970, after only a short time on the market and with an incomplete course, some 15,000 students had been exposed to the commercial version of the material. It was anticipated that the volume for 1971 would quadruple. Most of the units were purchased separately, since the completed course was not yet available. There was some evidence that the purchase of one unit seemed to trigger the purchase of others. The barrier of price seemed only to influence the sale of Unit One, which contained the Portsville models. When other units were purchased at more moderate prices, the purchasing districts often reconsidered and ordered the first unit. The market that was most receptive to the materials appeared to be the suburban districts, which typically are richer and more open to curriculum change. The big city districts seemed hampered by adoption policies and bureaucratic structures that discouraged adopting this type of packaged material (remarks by Mr. Whitlow, representative of Macmillan Publishing Company, at Steering Committee meeting, June 15, 1970--recorded by author, who attended as observer).

In the spring of 1974 Switzer *et al.* at the University of Michigan carried out a study of the dissemination of ten selected social studies project materials in five midwestern states. This was the first data of its type gathered by a group not associated with the Project. Their findings indicated that, among social studies teachers in general, some 29 percent had heard of the Project, some 18 percent had examined the materials, and some 5.2 percent had used them. Among teachers who actually taught geography courses, 75 percent had heard of the Project, 63 percent had examined it, and 33 percent had used it. Of the ten projects examined in the survey, only three had higher use in this "subject matter taught" category. Although the survey indicated that the Project had low general acceptance, it also showed that the Project was having considerable impact in the areas of the school curriculum for which it was intended (Switzer *et al.* 1974).

Figure 3.

Semantic Differential of the HSGP's Impact on the AAG, NCGE, and Trials Teachers



AAG profile: ——
NCGE profile: ---
Trials teachers profile: ...

*Means differ significantly at .01 level
**Means differ significantly at .05 level

The levels were determined by multiple comparisons with unequal n's and equal variances. The Tukey A method was employed.

In 1974, the ERIC Clearinghouse for Social Studies/Social Science Education undertook a survey of the extent of use of nine "new social studies" curriculum packages, including HSGP, in four additional states: California, Colorado, Connecticut, and Texas. From each state, 150 schools were selected randomly from a complete list of the schools in the state. One questionnaire per each 100 students in each school was sent to the principal, who was asked to distribute them to the social studies teachers in the school. Of the 4,783 questionnaires mailed, 908 were completed and returned. The results were quite similar to the Switzer findings. Six percent of the respondents reported using HSGP materials during the past school year. Of those respondents who were actually teaching geography courses, 28 percent were using HSGP. The questionnaire also asked for qualitative judgments about the materials. In a combined index of the three quality-of-use questions (How often did these materials work well with your students? How do these materials compare with other social studies materials you have used? Would you recommend these materials for use by others?), HSGP ranked second highest of the nine packages (Turner and Haley 1975).

The Discipline as a Project Goal

At first it may seem unbelievable that a group of professional geographers would look to a year-long high school course as a means of saving their discipline. This rationale for the Project, however, appeared in the pages of the first funding proposal and persisted in the Project's literature throughout its life. The rationale becomes more credible when one realizes that a major problem perceived by the discipline was that of professional recruitment. Viewed in this light, it is hard to deny the impact of a well-written and interesting geography course on the future of professional geography. The thought of potentially tens of thousands of highly motivated students and their teachers experiencing "true" geography for the first time was exhilarating. It was especially so when contrasted with the reality of a high school environment in which a sterile subject was taught by unwilling teachers to poorer students.

The decision to use geography specialists as unit authors in the

Project supplanted an earlier project emphasis which gave the task of curriculum construction to classroom teachers and a general content manager. The dominance of the professional geographer throughout the Project's history gave credence to the geographers' belief that a good course must begin with good geography. Much of the turmoil within the Project came from the varying interpretations of what constituted "good geography."

The High School Geography Project initially defined "good geography" through the eyes of the academic scholar. The debate about good geography developed when the Project began to involve people from outside the geographic community. An important input into the definition of good geography was provided by the students who experienced it and the teachers who taught it. The broader educational community began to demand and then came to expect a geography that was also pedogogically sound.

Toward a Credible Geography. A discipline is strengthened if it is used. A discipline will be used if it contains ideas and methologies that are of interest and significance to teachers and students. When interviewed, White claimed that although strengthening the discipline was a concern for some people, he was personally more interested in strengthening education in geography. By strengthening one, you invariably strengthen the other (White interview, May 5, 1970). There is little doubt that interested students and a solid educational framework have proven to be ways of promoting the discipline of geography.

The results of the Project's final evaluation indicated that, indeed, the Project was increasing the amount of interest and activity in geographic education at the secondary level. When asked if they were presently using the High School Geography Project materials provided in previous years' school trials, 77 percent of the former Project's trials teachers indicated they were. Of special interest was the fact that 64 percent were teaching primarily geography subjects; prior to being recruited for the Project, no more than 30 percent were teaching primarily in geography. At least in some schools of the nation, the Project had influenced the amount of geography being taught. This may be an indication that arguments about "Why teach geography?" were shifting

to the question of "How may geography be taught better?" (Richburg, June 1970, p.7)

Toward a Better Geography. The Project has been able to present "good geography" while at the same time making the course an interesting one for students and teachers. The intellectual content of the High School Geography Project was rigorous enough that White stated,

> There need be no apology for them [units] on grounds of their relevance and sophistication for high school students. The examination of factors making for specialization in city land uses, of the theory of central place arrangements, of the role of site and situation in manufacturing location, of the range of choice by farmers in using similar habitat, of the process of culcural diffusion, and of water balance as related to resource management is calculated to arouse curiosity as to unsolved problems while giving practice in employing the established ideas in other areas (White, Nov. 24, 1967, p.12).

Although he did not dispute the rigor of the material, William Garrison suggested that the material was dated. "The Project," he claimed, "is mainly based on stuff that is twenty years old or older, and it makes me sad that we cannot move more quickly to place what we know into practice" (Letter to Kurfman from Garrison, May 7, 1970). McNee, who was very concerned with the "gatekeepers" of educational change, did not support Garrison's view that the material was years out of date. He did admit, though, that the geography in the course was at least ten years out of date, due to the time lag involved in publishing materials (McNee remarks at Steering Committee meeting, June 16, 1970--recorded by author, who attended as observer). Buckley Robbins felt that, at best, the Project was a holding action that would stimulate more important efforts in the future. "Society," according to Robbins, "has no provision for continuous curriculum change" (Letter to Kurfman from Robbins, May 11, 1970).

McNee took a different tack when he suggested that some innovation in geographic content may have been sacrificed for innovation in learning strategy. Some innovation in content was lost when the original settlement theme outline was abandoned. The innovation on the part of the unit authors was more in the area of strategies than content (McNee remarks at Steering Committee meeting, June 16, 1970--recorded by author,

who attended as observer). The Project may have shortened but it never closed the gap between the frontiers of geographic scholarship and what is taught in the classroom.

Toward a Unified Geography. Richard Keppel raised another issue that could have an impact on geography as a discipline. He lamented the fact that the course had lost its continuity. Without a course structure, there might be fewer adoptions of the course as a whole and greater fragmentation of the course among the social studies. This would lead to the introduction of no more courses in geography than are being offered now (Letter to Kurfman from Keppel, May 22, 1970).

Taking this theme one step further, Kohn warned:

> The incorporation of materials and learning activities of HSGP into other discipline oriented courses would undoubtedly make such courses more interesting and meaningful, but it would be the least satisfying role for the project to play in so far as the profession of geography is concerned. Individual students would be exposed to only bits and pieces of present units, depending on the particular course they might happen to elect. Little appreciation, it appears, could be developed for the overall structure of geographic knowledge, or for the methodology provided by the discipline (Kohn, June 1970, pp. 4-5).

A course developed to "save" the discipline might have the effect, through unit fragmentation, of making the competing social studies more attractive to the potential geography student. The amorphous nature of social studies is a little bit like the Hindu religion which, rather than being conquered by competitive systems, absorbs them as part of its own.

Possibly these concerned geographers were asking the wrong question. If the geographic discipline is integrative, as the Project suggests it is, the question may not be how to prevent it from being absorbed, but how to guide that absorption so that the unique geographical contribution is preserved. The success of geography as a discipline depends on the criteria of the person making the judgment. The discipline might well benefit from its representation in the multidisciplinary light of the Project materials.

By the late sixties terms such as *multidisciplinary* and

interdisciplinary were marking a new trend in education. The focus of the sixties on separate disciplines was giving way to a focus in the seventies on the orchestration of the disciplines. White presented this sense of the future when he suggested that the High School Geography Project could be the model used to integrate the social sciences (White remarks at Steering Committee meeting, June 16, 1970--recorded by author, who attended as observer). Morrissett supported this idea when he opined that the Project did integrate the various disciplines, while maintaining the perspective of geography (Morrissett remarks at Steering Committee meeting, June 16, 1970--recorded by author).

Teacher Education as a Project Goal

The Project "backed into" the objective of teacher education. In the early stages, there was the intention of making as wide an audience as possible aware of the "new geography." The Project wished to see its materials in the hands of as many students and teachers as possible. Presentations were made by the Project staff to national and state professional association meetings and any other groups that were willing to listen. But these efforts were not based on a broad conception of teacher education that was to develop later.

At first the Project was largely an effort of professional geographers whose attentions focused on the content aspects of the materials. "Good geography" was stressed almost exclusively during the initial phases of the Project. It was only later that a consciousness of "good education" developed. As this consciousness grew, professional educators were brought in to help construct the new instructional approaches that began to characterize the materials. Following on the heels of this increased attention to new teaching methods in the materials was a growing awareness of a need to educate teachers in using the new methods. The early dissemination efforts gave way after 1967 to developing workshop activities to help teachers understand the content, learning strategies, and philosophy of the Project's materials; conducting institutes and conferences focusing on the teaching of the materials; and, finally, developing and testing self-contained teacher education kits (Carswell and Cason, June 1, 1970, pp. 1-2).

The Geographer-Educator. It is often claimed that the style and methods of those who teach the content disciplines in colleges have greater effect on the teaching behavior of future teachers in their classes than does instruction by education methods professors. If this is the case, then one of the critical influences of the High School Geography Project was on the instructional behavior of university geographers.

A repeated theme of the 1970 survey responses was that the teaching approach of many college geographers had changed as a result of their contacts with the Project materials. Kenneth Corey, of the University of Cincinnati, had held a dismal view of geographic education prior to his involvement with the High School Geography Project. By 1970 he was using "inquiry techniques with large doses of role playing and gaming" in his university teaching (Letter to Kurfman from Corey, May 26, 1970). Elmer Keen, author of the Japan unit, had had difficulty making his unit fit into the inductive framework of the Project, but he reported that his personal teaching had become more inductive and that he now was more sensitive to his students (Letter to Kurfman from Keen, May 19, 1970). Melvin Marcus, of the University of Michigan, claimed that developing the habitat unit had caused him to rethink many of his attitudes and philosophies regarding geographic education. He began using a problems approach in his introductory geography courses and the Project materials themselves in his "teaching of geography" course (Letter to Kurfman from Marcus, May 19, 1970).

Not only had the instructional behavior of individual geographers directly associated with the Project changed. Apparently the Project helped to create a new climate within the profession that permitted or even encouraged other geographers to become more actively interested in educational questions. Robert Harper, of the University of Maryland, suggested that the Project "made geographic education respectable in graduate schools" (Letter to Kurfman from Harper, May 5, 1970) and Angus Gunn, of the University of British Columbia, sensed a heightened interest in geographic education in the departments of geography that he had visited across the country (Letter to Kurfman from Gunn, May 29, 1970).

The Educator-Geographer. The realization that the course materials had a powerful impact on teacher attitudes and behaviors developed early in the Project. Teacher reactions such as those compiled by Richburg at the end of the Project had been typical throughout the school trials:

> Teaching it was sort of a "peak experience." It would be hard to go back to face turned-off kids. It would either make me work like hell at teaching or make me feel guilty that I didn't.
>
> Developed a real awareness of what the student is doing as opposed to what I was teaching--encourage simulation, role-playing, and games in general.
>
> These materials have suggested new ways or organizing materials and evaluating instruction.
>
> I am now teaching more concepts and less factual information.
>
> It makes my classes more activity-oriented. Provides the lower achiever with a chance to "participate."
>
> After four years of contact with the High School Geography Project materials, I find that I must force myself to present periodically an interesting lecture. During about 85 to 90 per cent of my teaching, I use the inquiry method. Not only I, but my entire Social Studies Department, has accepted the method and are pleased with the result.
>
> It has taken me away from the role of know-all to that of one-to-one relationship with my students.
>
> It has certainly made me a much more inquiry-oriented teacher, and the techniques have suggested a number of methods I have been able to utilize in all my courses.
>
> I have developed many of my own units which emphasize the inquiry approach (Richburg 1970, pp. 7-8).

As those associated with the Project gained experience in school trials and dissemination activities, they began to think more and more seriously about teacher education efforts. When the pressure of preparing the course materials for commercial publication was finally removed, the Project staff turned its full attention to teacher education. The shift of attention was marked in July 1969, when Kurfman, an educationist, took over the directorship from Helburn, who returned to the world of academic geography (though he continued his active advocacy of innovative education from there). Under Kurfman's leadership during 1969-1970, the staff developed a set of three teacher training kits that

capitalized on the Project's potential for teacher education.

Methods courses and teacher education programs had typically begun with attempts to establish within the prospective teacher a philosophical point of view regarding education. Once the philosophy of education was well established, the teacher could specify objectives and then translate them into curriculum. The objectives that were written into the teacher's daily lesson plans were considered a reflection of the teacher's philosophical view of reality. The learning strategies and content of the lesson plans were considered a reflection of the teacher's epistemology and learning theory. This ordering of teacher training, from the abstract to the concrete, was completely reversed in the High School Geography Project's teacher training kits.

The Project's teacher training kits had teachers first work through student learning activities taken directly from the units of the course. After each direct experience with a course activity, the teachers were debriefed. The debriefing focused on the teaching strategies and learning theory embodied in the particular activity. Then, the teachers were asked to apply these ideas to developing other activities on their own.

When the kits were tested, 64 methods teachers answered a questionnaire about them. Figures 4 and 5 below indicate the positive reception of these kits.

Figure 4.

Evaluation Report from the Experimental Trials
of the HSGP Teacher Training Kits
on Respondents' View of Kits
Effectiveness

Compared to what would normally take place in this methods course or inservice workshop, how effective was this kit?
(all 64 instructors responding) (responses listed in percentages)

	Simulation	Inquiry-Media	Evaluation
Much less effective	---	2	---
Somewhat less effective	2	6	4
As effective	29	21	15
Somewhat more effective	27	23	25
Much more effective	42	48	56

Figure 5.

Evaluation Report from the Experimental Trials
of the HSGP Teacher Training Kits
on Future Use of the Kits

Will you use this kit again in your methods or inservice class?
(all 64 instructors responding) (responses listed in percentages)

	Simulation	Inquiry-Media	Evaluation
Yes	92	94	92
No	---	2	2
Uncertain	8	4	6

Would this kit be useful in a general methods class?
(all 64 instructors responding)

Yes	90	85	90
No	6	---	---
Uncertain	4	15	10

By the June 1970 final meeting of the Steering Committee, three teacher training kits (*Using Simulation to Involve Students, Using Media to Stimulate Inquiry,* and *Using Evaluation to Improve Instruction*) had been tested and found highly successful. But in reality the program was less than half completed. The existing kits had yet to be revised on the basis of feedback from their trials and at least three other kits were in the planning stages. There was $16,000 remaining in the Project budget. The Steering Committee debated whether to hold this money back so that the teaching training program could be completed or to bring the Project to a close on schedule and turn the money over to the AAG for maintaining the Project's correspondence.

There were strong reasons for completing the teacher training program. An unexpected outcome of the Project had been the shift in focus to teacher training materials as means of bringing about change. Sister Hermana, representing the past trials teachers at the meeting, made the plea that teacher training was vital to the Project's success. Morrissett made the point that curriculum reform and teacher education are mutually supportive and offered the services of the Social Science Education Consortium to oversee the completion of the teacher training program.

Yet, the final decision was to turn the remaining money over to AAG and not complete the kits.* The Steering Committee felt that the Project's goal of creating a secondary school geography course had been realized and even surpassed. The teacher training kits were never a part of the original goal, even though they had been an added benefit of the Project. It was time for the Project to close. By voting to terminate, the Project made history as the first large curriculum development project to come voluntarily to an end.

*Eventually portions of the kits found their way into a methods text, *Experiences in Inquiry: HSGP and SRSS* (Allyn and Bacon, 1974).

Chapter 5.

Implications for Education

Until recently, new curricula usually appeared to be a great deal like the ones they were designed to replace. Curriculum development efforts tended to be short-term, local endeavors, usually involving teachers working only on a part-time basis and supported by modest resources. Under these conditions, the process of curriculum change was necessarily slow and sporadic.

Curriculum at the Crossroads

After the launching of the Russian satellite Sputnik in 1957, there was a fundamental break in this pattern of curriculum development and change. The break was brought about by the sudden and massive infusion of federal funds into curriculum innovation. The alphabet soup of federally funded curriculum projects spawned products that are perceptibly different from the curricula they were designed to replace. While they may retain many general goals similar to the pre-Sputnik curricula, they have many distinctive new ones. Many of their presentational modes are built upon new or revised assumptions about the nature of the learner and the nature of society.

The curriculum reform movement of the past decade went a long way toward developing alternatives to the curricula then being used in the schools. But now, the explosive phase of curriculum building by federally financed, national projects is over. The next phase of the reform must come at the local and district levels. It must stress selection, evaluation, and incorporation of the Project's better products into the public school setting. Beyond this, the schools can and should take advantage of the nonproduct outcomes of the projects. The curriculum development and curriculum evaluation models used by the projects ought to be adapted to local, smaller-scale usage. Also important is the potential of the projects' teaching paradigms for changing teaching behavior.

The projects' materials reflect a degree of sophistication unheard

of ten years ago. If school administrators and teachers are to make sense out of the curriculum reform movement, and maintain its momentum, they must devise programs to develop, analyze, evaluate, and use systematically the content and methods of the curriculum project materials.

Where Do We Go from Here?

The reins of curriculum reform appear now to rest in the hands of public school personnel. Whether the best products and processes to come out of the projects of the sixties are furthered or dropped depends primarily on their decisions and action. Prospects seem to be good for maintaining two of the most important emphases of the High School Geography Project.

Confidence in Teachers. Change, if it is to be meaningful, must take the teacher as its heart. Teachers are more than a component of the change process, for they set the boundaries within which meaningful change can take place. The High School Geography Project reflected a new confidence in teachers and in their ability to take a creative and active role in curriculum design and implementation. Teachers must build on this confidence and reassert their decision-making role in the curriculum. They can do this by experiencing, analyzing, and adopting the best social studies materials now available for use. They can bring to the new curricula a rich backlog of their own teaching experience and enrich both their own experience and the new curricula from the interaction of the two.

Confidence in Students. The High School Geography Project reflected a new confidence in the ability of youth to take an active role in their own education. The Project defined the purpose of its course in terms of student learning rather than content coverage. The aim was to create scholarly-investigative behavior on the part of students and the inquiry leading to that behavior was analytical, based on a logical structure of knowledge and the modes of investigation used by geographers. But the Project also recognized an existing cognitive structure within the students themselves. Students were encouraged to integrate the concepts, generalizations, constructs, and theories treated in the course with their own cognitive structures and use the new intellectual tools in

their own search for meaning. The greatest challenge facing the social studies of the future is to capitalize on this increased student involvement.

A Challenge for Curriculum Developers

There is a lesson, too, from the High School Geography Project for curriculum researchers and developers operating outside the public school system. The history of geography as a school subject suggests that, for a great deal of the time, curriculum languishes in the backwaters of intellectual thought, to be periodically swept into the mainstream where it is revitalized and invigorated, only to enter a short time later into new backwaters and new periods of stagnation. The rapids of the stream are the educational reformers who represent changing educational priorities more than they represent new or revolutionary thought. Their ability to generate innovation, unfortunately, is matched by a corresponding inability to translate that innovation into terms the curriculum consumer can understand, much less implement into widespread practice. In many cases the movements they represent are short-lived, for once the rapids are crossed, the articles written, and the accolades given, the funding currents carry the reformers to new rapids, while the curriculum drifts from eddy to eddy without any cumulative, developmental flow.

Curriculum leaders should be aware that involvement in curriculum research and development implies a corresponding responsibility in the areas of curriculum dissemination and implementation. Acceptance of this responsibility will force curriculum leaders to be more responsive to the people they serve and more sensitive to their problems. Meaningful curriculum can be built not on rhetoric--only on continuing practical endeavor.

APPENDIX

A Sample of Evaluation Instruments

TEACHER ACTIVITY EVALUATION FORM

_____Teacher's Name Activity Name_____

____1. How much class time in minutes did the activity take?

____2. How much more time could have been used profitably?

3. Describe briefly what you did when carrying out the activity that was different from suggestions in the teacher's guide.

_____

_____

_____

_____

_____

_____

____4. How much did you like teaching the activity?

A. Not at all B. Little C. Generally D. Very much

Comments:_____

_____

____5. How interesting was the activity for your students?

A. Dull B. Generally not interesting C. Generally interesting
D. Extremely interesting

Comments:_____

_____

____6. How much do you feel your students learned from the activity?

A. Nothing B. Little C. Fairly much D. A great deal

Comments:_____

_____

HSGP Student Questionnaire for Growth of Cities Unit

_____Student Number

Directions: Your opinions are very important in changing HSGP materials. We need to know what you honestly believe so the final version of the course will reflect what students as well as teachers think. Blacken the appropriate space on the HSGP Questionnaire Answer Sheet for the first 28 questions.

What did you think of the unit and its activities in terms of their interest to you?

1. The unit as a whole
2. The reading in the unit
3. Site Selection Diagrams
4. American Cities
5. Local Community Site Considerations
6. Bruges, a Medieval City
7. Story of Portsville
8. Time-Distance
9. Models of City Form

Possible Answers:
- A. I do not remember it well enough to say
- B. Dull
- C. Generally not interesting
- D. Generally interesting
- E. Extremely interesting

Did you feel that you generally knew what you were supposed to learn from the unit and its activities?

10. The unit as a whole
11. The reading in the unit
12. Site Selection Diagrams
13. American Cities
14. Local Community Site Considerations
15. Bruges, a Medieval City
16. Story of Portsville
17. Time-Distance
18. Models of City Form

Possible Answers:
- A. I do not remember it well enough to say
- B. No
- C. Generally not
- D. Yes, generally
- E. Yes, almost always

How much do you feel you learned from the unit and its activities?

19. The unit as a whole
20. The reading in the unit
21. Site Selection Diagrams
22. American Cities
23. Local Community Site Considerations
24. Bruges, A Medieval City
25. Story of Portsville
26. Time-Distance
27. Models of City Form

Possible Answers:
- A. I do not remember it well enough to say
- B. Nothing
- C. Little
- D. Fairly much
- E. A great deal

TEACHER FINAL QUESTIONNAIRE FOR UNIT TWO

Teacher's Name_____

Directions: Please react to the question below by checking the appropriate space and/or filling in the blanks provided.

A. Reading Materials

Yes	No		
___	___	1.	Do you believe the reading materials are clearly written and understandable for the average student?
___	___	2.	Do you believe the reading materials are clearly written and understandable for the below average student?
___	___	3.	Do you believe the reading materials are well-organized from an instructor's point of view?
___	___	4.	Should there be more student reading in the unit?
___	___	5.	Should there be less student reading in the unit?
		6.	Suggestions and/or comments about the reading materials:

_____

_____

_____

B. Teacher's Guidelines

Should the Teacher's Guidelines be made more effective

Yes	No		
___	___	7.	In providing clear directions for the teacher?
___	___	8.	In clarifying the objectives of the unit?
___	___	9.	In suggesting a variety of learning activities?
___	___	10.	In providing the geographical background you needed to teach the unit?
___	___	11.	In suggesting supplementary reading material for students?

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